Quadriga
ASSET MANAGERS

December, 2023

Quadriga Monthly Anti-Bubble Report FY23 and Year Ahead Outlook

Dear @@firstname,

We hope this note finds you well.

We are pleased to inform you that, effective 1st January 2024, the partnership between **Quadriga Asset Managers** and **36 South Capital Advisors LLP** has successfully expanded from **Investment Advisory to Investment Management.** Under the Investment Management Agreement, **Diego Parrilla and Alfonso Torres,** as employees of 36 South, will continue to directly manage **Quadriga Igneo UCITS** and **Quadriga Aqua UCITS** strategies. For the avoidance of doubt, **there are NO CHANGES to the strategies, nor vehicles, nor terms, and there is NO ACTION needed**. The only difference is that Diego and Alfonso are now part of a larger investment and research team at 36 South, an established leader in volatility and tail risk investing with headquarters in London with a **22 year track-record, currently managing ~ USD 2 billion** across a range of strategies and vehicles, including the Quadriga Igneo UCITS and Quadriga Aqua UCITS mandates. Any questions or clarifications about these positive developments, please kindly let me know.

In terms of structure, the **"Quadriga Monthly UCITS Update"** will continue to include **1) monthly factsheets** for Igneo UCITS and Aqua UCITS strategies, **2) market commentary** (what's new and what's changed during the month), **3) Performance attribution**, **4) Portfolio Positioning Update**, and **5) Global Macro and Volatility Outlook**, and propose to send separately **"Diego's Anti-Bubble Report"**, which will complement the monthly report with more structural and thought-leadership material. The next issue of "Diego's Anti-Bubble Report" will discuss "How Downside Alpha and Rebalancing Alpha have the potential to simultaneously enhance absolute returns and reduce risk", and will include links to previous thought-leadership pieces such as "The Frogs in Boiling Water" or "Chronicle of Crisis Foretold", for first readers and/or those interested in reviewing different aspects of the Contrarian Anti-Bubble Investment Framework.

We hope the new format will be well received. Any thoughts and feedback appreciated.

1. Monthly Update Quadriga UCITS Strategies

1.1. Protected Rebalanced US Equity, +2.8% December 23, +10.6% YTD

The enclosed [Aqua UCITS December 23 Factsheet]provides a detailed overview of the performance and positioning across the core equities and long insurance portfolios. The Protected US Equity Strategy combines the benefits of a core long 100% US Equities protected with a long-only Insurance Program where both components are rebalanced monthly to their neutral weights. The long only insurance has a target of 10% to 15% in **premium-at-risk** and is **managed pari-passu with Igneo UCITS.**

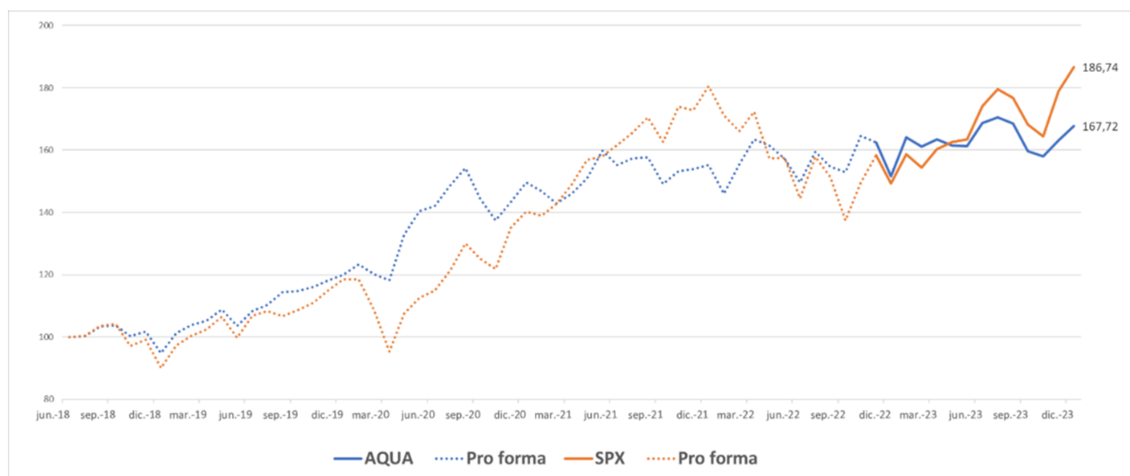
A switch from **Unprotected Equity to Protected Equity** is subject to several benefits and considerations, including:

- **Switch Unprotected Equity** for **Protected Equity** with **zero net cash-flow** requirement,
- **Remain invested** in US equities but **enhance protection** at expense of potential basis risk and underperformance vs passive equity markets.
- **Reduce volatility** and enhance risk adjusted returns (**Sharpe Ratio** and **Sortino Ratio**).

- **Reduce "noise"**. One line item, instead of two. Less emotions during extremes tend to produce better decisions.
- **Embrace hostile markets**. Buy cheap equities financed by profits on insurance.
- **Embrace complacent markets**. Buy cheap insurance financed by profits on equities.
- **Monthly Rebalancing**. Incremental Returns from Negative Correlation and Mean Reversion.
- **Attractive Entry**. Current valuations in US Equities and Insurance offer attractive entry for protected strategies like Aqua.
- **Seeding terms** Class A USD **ISIN LU1871084460** a 1.5% management fee, 0% performance fee, daily liquidity at NAV.

As per the graph below, Protected US strategies can help **enhance absolute returns (+11.3% p.a. vs +9.5% p.a.)** and risk-adjusted returns, (both return per unit of average volatility, **Sharpe 0.6 vs 0.7)** and return per unit of "bad volatility" (Sortino 1.0 vs 1.3), whilst simultaneously enhancing capital preservation as **Peak to Trough (-23.9% vs -10.9%).**

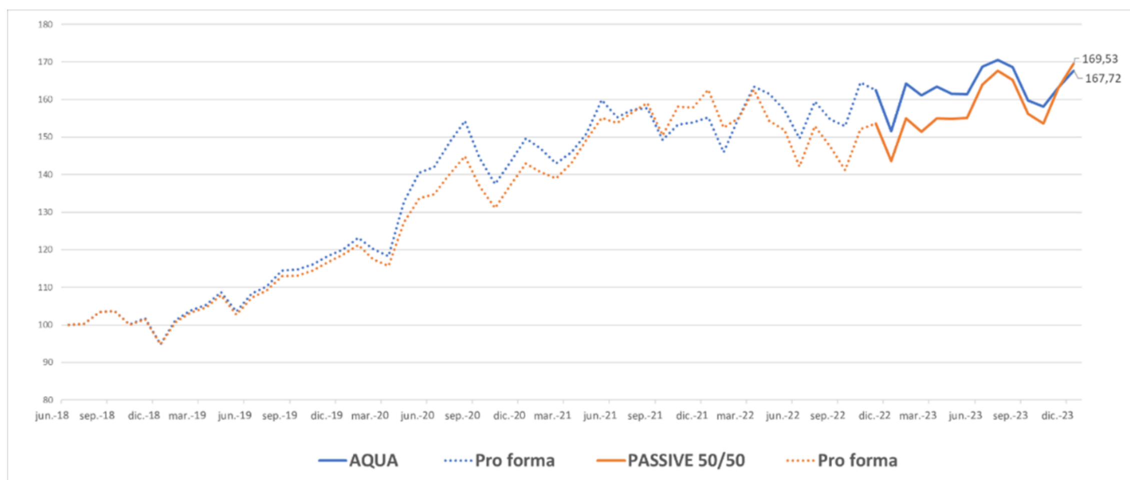
	Monthly (%)	YTD (%)	LTD (%)	LTD (% p.a.)	Vol (%)	Sharpe	Sortino	Peak Trough	NAV
SPX	4,4%	24,3%	86,7%	12,0%	18,6%	0,6	1,1	-23,9%	186,7
AQUA	2,8%	10,6%	67,7%	9,9%	13,9%	0,7	1,4	-10,9%	167,7
Difference	-1,6%	-13,7%	-19,0%	-2,2%	-4,7%	0,1	0,3	13,0%	-19,0



1.1.1. Passive Basket vs Rebalanced Basket

In addition to the contribution from the Equity and Insurance Portfolios, Quadriga Aqua UCITS Protected US Equity benefits from another important consideration: **portfolio rebalancing**, a mechanism that effectively behaves like a **good unemotional investor** that **systematically accumulates cheap insurance during complacent markets** (such as today) and **systematically accumulates distressed assets during hostile markets** (such as March 2020). Those investors managing the long equity and long insurance via separate legs tend to suffer from emotional distress and make the wrong decisions at the wrong time.

The following graph compares the performance of a passive basket vs monthly rebalanced basket, where the difference represents the value of **compounding capital preservation**. No crystal ball. No magic formula. Just unemotional systematic rebalancing, which in our view can be a valuable source of compounding and incremental returns in general, and during the high volatility regime we anticipate ahead.



1.2. Quadriga Igneo UCITS, -1.8% in Dec 23

The enclosed Igneo UCITS December 23 Factsheet provides a detailed overview of the performance and positioning, including closed, restructured, and new positions. The **Total Premium at Risk** for Igneo was **34.3%** as of the end of November, with a **diversified insurance portfolio 1) across asset classes** (Equity/Credit, FX/Rates, Commodity Inflation) **2) across maturities** (short dates directional gamma and long dates Vega and duration), **3) convexity and risk premia** (long vanilla bias and risk premia across the forward term-structure, volatility surface, and correlation matrix) subject to constraints on **premium at risk** (long only option) and **carry** (positive, neutral and negative), which altogether seek to generate **negatively correlated alpha** during **adverse, hostile and volatile** markets, as the strategy has consistently done since launch its launch (+12.7% 4Q18, +16.5% Aug19, +42.5% 1Q20, or +22.2% Feb22, amongst others) and as we hope to do during the hostile and volatile markets we anticipate ahead of us.

	2024	2025	2026	>2026	TOTAL
EQUITY & CREDIT	3,9%	0,0%	0,0%	0,0%	3,9%
FX & INTEREST RATES	0,7%	0,0%	2,6%	16,0%	19,3%
COMMODITIES & INFLATION	5,7%	1,6%	4,6%	0,0%	12,0%
TOTAL	10,3%	1,6%	7,3%	16,0%	35,2%

	CONVEXITY	CARRY	TOTAL
EQUITY & CREDIT	3,9%	0,0%	3,9%
FX & INTEREST RATES	19,1%	0,2%	19,3%
COMMODITIES & INFLATION	0,0%	12,0%	12,0%
TOTAL	23,0%	12,2%	35,2%

	2024	2025	2026	>2026	TOTAL
CONVEXITY	4,6%	0,0%	2,4%	16,0%	23,0%
CARRY	5,7%	1,6%	4,9%	0,0%	12,2%
TOTAL	10,3%	1,6%	7,3%	16,0%	35,2%

	2024	2025	2026	>2026	TOTAL
SPX	3,7%	0,0%	0,0%	0,0%	3,7%
VIX	0,2%	0,0%	0,0%	0,0%	0,2%
SPX & FX	0,0%	0,0%	0,0%	0,0%	0,0%
EM FX	0,7%	0,0%	0,2%	0,0%	0,9%
DM FX	0,0%	0,0%	2,4%	16,0%	18,4%
Gold	0,0%	0,0%	0,0%	0,0%	0,0%
Gold vs DM FX	0,0%	0,1%	4,6%	0,0%	4,8%
Gold vs EM FX	5,7%	1,5%	0,0%	0,0%	7,2%
USD Rates	0,0%	0,0%	0,0%	0,0%	0,0%
Total	10,3%	1,6%	7,3%	16,0%	35,2%

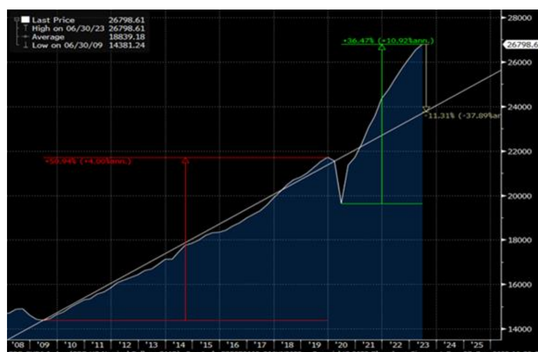
2. December 2023: What happened? What's new? What's changed?

During December the decline in yields continued with 45bps drop in yields across the curve supported by a significant shift from the FED. The FED has been repeatedly referring to three data, financial conditions, "Supercore" inflation, and core services less shelter inflation, as important data to follow to help the monetary policy decisions. Although all three metrics turned (financial conditions much loser and inflation metrics much higher) on the hawkish side, the FED basically skipped any comments on those, making the pivot very significant in our opinion. This led to another strong rally in risk assets during December, approaching the levels seen at the end of 2021, when rates were still at very low levels. We see the FED now ready to react strongly should any problems arise for the economy or equity markets, FED minutes even reflected some debate about QT reduction, the pivot is significant.

- **China at the epicenter of future problems.** The number of issues is large, from the burst of a housing and infrastructure bubble that is pushing consumption down, to developers' defaults, shadow banking products distress, local governments overloaded with debt or youth unemployment. During December the CNH appreciated only slightly vs USD while other major currencies had a deeper appreciation. The equity markets are reflecting the disconnect between China and RoW, China is at the crucial moment of a bursting housing/infrastructure/credit bubble, and all the measures taken so far have not helped revive growth expectations and by connection equity markets. So, we still think mayor problems are ahead of us for China, we know what happens when real estate related bubbles burst, especially if households have a significant part of their wealth in housing, and we think the cleanest solution for China is to let the currency go or face big drop in asset prices. China has been a substitution for diminish demand from developed economies since GFC, we cannot count on that anymore, which puts further pressure for the next downturn.
- **Big Tech leading Nasdaq to +44.7% 2023.** Broad rally across the board with rates sensitives industries leading the way. The 2023 top industries contributors to SPX performance was leaded by Software, Semiconductors and Tech hardware, with the Magnificent 7 contributing 13.7% of the 24% SPX performance, being Apple, Microsoft and Nvidia the three top contributors.
- **Narrow Market Breadth.** The strength in the US equity market in 2023 has been driven by strong gains in a few stocks and has narrowed market breadth to levels not seen since 1999, leading into the dot.com bubble, as the AI driven strength has benefited large tech. During 2023 55 companies performed more than 50% and 110 companies more than 30%, so the internals of SPX Index have move significantly, just that the size of the biggest companies dwarfs the contribution of other companies to the overall index performance.
- **"Fiscal Responsibility Act" (text-book misnomer)** The US debt ceiling drama was postponed until January-February 2024 again it what seems to be a preparation for an interesting election year. Meanwhile the fiscal spending keeps at full gear 9% higher than last year and 38% higher that pre Covid trend. Budget deficit expectations for next three years are around 6%, doubling the levels before pandemic.
- **Move in Fed Expectations.** Data is kind of mixed with some very negative surprises in services ISM employment numbers, while NFP data still holding well and last CPI showing some kind of resilience. But the FED rate expectations have not changed and has 6 cuts discounted for 2024 with 70% probability of a cut as early as March 2024.
- **US bank collapse since Lehman in 2008.** Mind-blowing that the recent collapse of FRB, SVB, Signature Bank and PacWest that happened during the past few months rank amongst the top 5 bankruptcies in the history of the US. We well know financial crises tend to follow reflexive processes where "fundamentals drive prices, but prices also drive fundamentals", and neither look great for US Regional Banks. The rally in regional banks during November and December has been significant however, as the stocks enjoyed the lower treasury yields.
- **Mummy and Daddy (and Cousins!) to the Rescue.** During the earlier stages of the crisis, Central Banks and Governments ("mummy and daddy") were quick to come to the rescue and contain the wave of systemic risk. In the US, the Federal Reserve and the US Treasury were quick to implement "systemic risk exemption" to guarantee

uninsured deposits and provide long term funding at par for non m2m assets underwater. In Europe, the European Central Bank was quick to intervene and successfully contains risk following the collapse of Credit Suisse, a 200-year-old historic bank, with a forced take over by UBS, within an environment of extreme confusion and chaos as the rules of the credit markets were changed with equity holders getting paid and AT1 bond holders wiped out, investors have already filed lawsuits. The recent acquisition of FRB assets by JP Morgan was backed by Jamie Dimon's message and narrative that the issues are isolated and contained, but those old enough may remember Bear Stearns in 2007, may see some worrying parallels as JP Morgan and UBS are willingly or unwillingly stepping-in to contain what is an extremely fragile situation as/when the "domino effect" accelerates and raises questions about the limits of further potential Public and Private bail-outs, which in our view will undoubtedly continue as/when the crisis extends. But all these issues are being eclipsed by the limelight of AI.

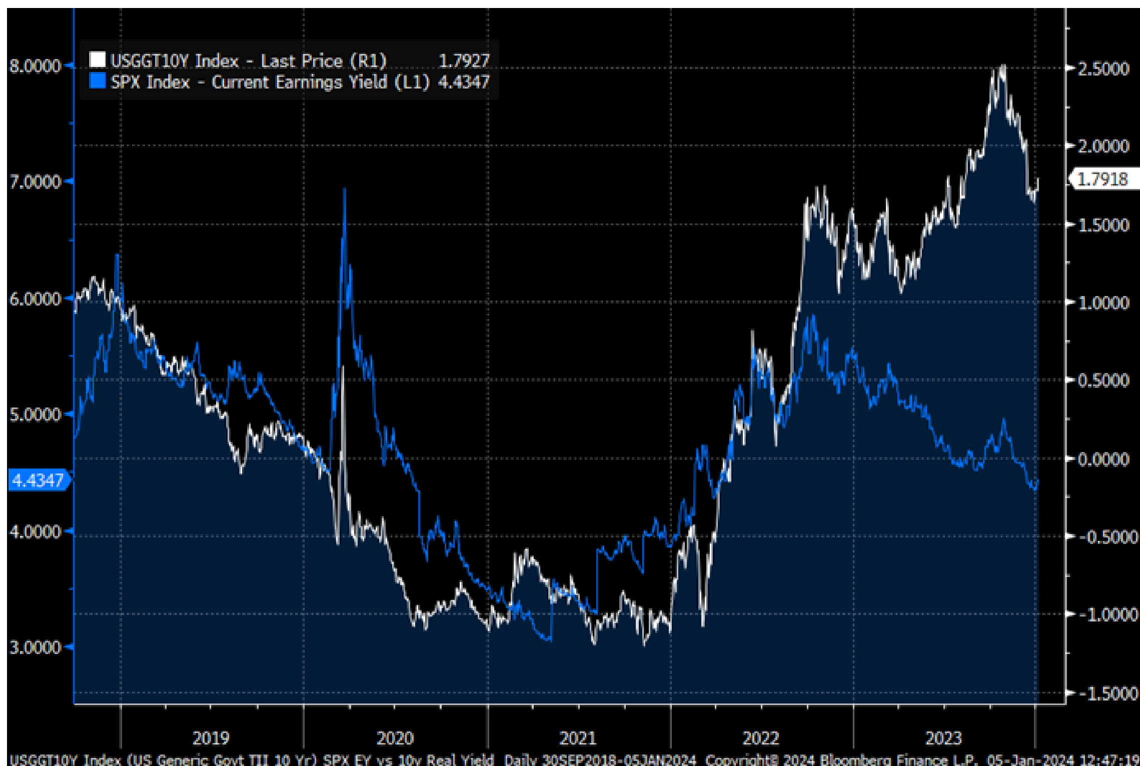
- **Credit Defaults Rise.** The domino effects of the US Regional Banking sector do not affect just the banks and the depositors, but also the companies that rely on their loans, such as Commercial Real Estate ("CRE"), a sector that is suffering from multiple headwinds, including higher interest rates and changes in work dynamics following the pandemic. The credit stress arising from higher interest rates may not be that widespread or evident yet, but worth noting the defaults in the car loans and credit card delinquencies, as well as the increase in HY companies defaults during 2023. Important to note the significant maturity wall that corporates are facing during 2024/25 that will increase funding costs.
- **Inflation Prints moderating still far away from target in some countries** while others show very low prints. Lack of confidence in OPEP+ production cuts and lower expected demand from China has pushed Oil lower, but be aware of renewed middle east tension with the Houthies attacks on tankers and the USA/UK reaction. The core inflation prints in US (3.901%), Europe (3.4%), and UK (5.1%), even after corrections, continue to remain stubbornly high. The oil correction gives some relief to inflation. Lower PPI prints and input prices in corporate surveys are showing way lower prices in manufacturing but have seen increases in services, another wrong signal for core CPIs. The dispersion in the headline inflation numbers is broadening with China in outright deflation (-0.3%) while Italy (0.6%) , Netherlands (1.2%) and Belgium (1.35%) have low prints inside the eurozone, while core CPIs broadly over 3% with the exception of China (0.6%)
- **"Nominal" Earnings remain Solid.** As per the title of last September newsletter, Nominal Data remains solid. I stress the attribute "Nominal" as Real performance is not as strong. While nominal growth has largely exceeded the trend since 2009, the real growth has managed just to join the trend broken by the pandemic, this is after increasing debt by 30%, massive money expansion, and unprecedented fiscal spending.



- **Equity Risk Premia vs Fixed Income (No premia left).** Worth noting that although the significant drop in bond yields since November has led the extreme overvaluation of equities vs bonds recede somehow, equities still look very expensive in relative basis. Looking at ERP comparing it to investment grades corporate bond yields and government yields, we can see how equities are expensive vs yields in historical terms.

These calculations consider the “equity duration” and take as comparison the equivalent point on the BBB and Government curves, we calculate it spot and 1y forward. For calculations methodology please refer to this note published in 2021 [(19) No premium in Equity risk premia | LinkedIn)]

Another way to look at its vs real rates, Equity yields too low given the levels of real interest rates as discounted by TIPs.



- **More Central Bank Hikes Ahead?** The US Federal Reserved hike expectations have been slashed and the market discounts 6 cuts for 2024. The FED has moved into “data dependent” mode but has clearly sifted to more dovish stand. For ECB market has now 6 cuts priced into 2024 with 80% probability. BOJ keeps its very dovish approach after some tweaks done again to language, but although the latest declaration from Ueda point to increased probability of some kind of tightening, at the time of BOJ meetings no change has happened so far. The December meetings brought the already mentioned sift in the FED and somehow less of a change from ECB and BOE. The “data dependent” mode are consistent with the high levels of implied volatility in interest rates, which stand in contrast to the low levels of volatility in equities and FX. More on this later.

- **The Refinancing Wall in 2H23.** Looking ahead, we worry that the combination of 1) "higher for longer" Real interest rates if the inflation doesn't decline as fast as expected, 2) credit contraction following the collapse in the US regional banks and beyond, 3) deceleration in economic activity and risk of nominal recession, amongst other drivers, may result in a "refinancing wall" for Sovereigns and Corporates from 2H2023 into 2024/26 which could feed into higher yields and credit spreads, posing problems ahead.
- **Artificial Intelligence vs dot.com.** It is clear that Generative Artificial Intelligence, such as GPT3, is a game-changer technology. During a recent conference call with one of the world's leading experts, it was compared to the invention of the Printing Press by Guttenberg, as beyond the clear implications for to enhance our productivity, GenAI is set to disrupt the way we learn. The applications and disruption will be major and the speed at which the changes are happening is truly staggering. One of the most obvious examples have been coding and programming where, if you were a well-paid programmer a few months ago chances are your job may be at risk or may even not exist anymore. The narrative and impact on productivity is currently dominating technology companies but could easily translate into other sectors, extending the squeeze. But like many other technologies, there is "double-edge sword" with positive implications (productivity, education, etc) but also negative uses (unemployment, social manipulation, cyber-crime, deep fakes, etc) which are worrying and, in my view, pose extraordinarily difficult ethical and social challenges to humanity and has brought the debate around regulation and control of AI has come to the front of global leaders.

I hope the ideas and strategies will be of your interest and remain at your disposal for any additional information or clarification you may need.