



Multi Asset Global Opportunities Fund

Portfolio Management Division

March 2026

Fund Description

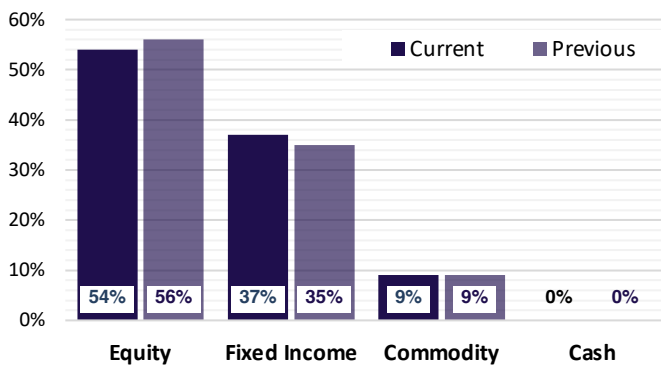
The Multi Asset Global Opportunities Fund is a virtual, actively managed portfolio run by Minerva Investment Management Society. It invests in listed equities, fixed income and commodities delivering long-term capital growth while controlling volatility. The portfolio is constructed through fundamental analysis and macroeconomic views, with the ability, on a tactical basis, to take short-term positions where the risk-reward profile is compelling.

Diversification is pursued across geographies, currencies, sectors and asset classes. Position sizing is guided by marginal risk contribution, correlation and liquidity. We typically target 30 holdings to maintain breadth while ensuring analytical depth. Derivatives are used solely for risk management, specifically to hedge identified tail risks and for currency hedging. They are not employed to create net leverage or to add directional exposure.

The portfolio is rebalanced semi-annually, with ad-hoc reviews to reposition around market shocks and dislocations. Instruments are limited to public markets; ETPs may be used to access niche exposures where this is the most efficient implementation route.

Our investment stance is anchored in open economic integration and free trade, enabled by the free movement of capital. Accordingly, no geopolitical tension, in and of itself, will preclude an allocation where fundamentals, valuation and liquidity justify it.

Asset Classes Weights



Investment Approaches

Top-down approach

Starting from our macroeconomic outlook, analysts identify industries or geographies and analyse the leading operators. Priority is given to durable growth potential, resilient balance sheets, cash generation and capital allocation when selecting candidates for the Multi Asset portfolio.

Bottom-up approach

If a security stands out to one of the investment analysts, a detailed analysis is to be done with a bottom-up approach. An internal discussion follows to contemplate the validity to the suggested investment, and to assess the fitting within the portfolio in terms of risk-return contribution and diversification.

Equity Research Team

Equity positions may originate from recommendations by Minerva IMS's Equity Research Team. Any proposal is reviewed incorporating later developments, company news-flow and valuation changes since the publication of the research note, before inclusion and sizing within the portfolio.



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About Minerva Investment Management Society

Minerva Investment Management Society (MIMS) is Bocconi University's leading student association dedicated to asset management. Founded in 2017, MIMS's Portfolio Management Division designs, manages and reports on two proprietary, fully disclosed student-run funds. The Division collaborates closely with the Investment Research, Macro Research, Equity Research and Quant teams to source ideas, and monitor risk.



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Performance Summary

	ITD ¹	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	Vol	Sharpe ²
2020	15,1%	+0.1%	-0.3%	+0.1%	+1.4%	+3.4%	+1.9%	-1.8%	+1.2%	-1.4%	+2.2%	+5.0%	+2.6%	+15,1%	6,9%	2,18
2021	45,2%	+3.0%	+2.3%	+1.5%	+0.7%	+0.5%	+2.4%	+2.0%	+1.5%	-2.3%	+4.7%	+2.4%	+4.9%	+26,1%	6,6%	3,94
2022	35,7%	-2.0%	+0.4%	+2.1%	-2.8%	-0.2%	-7.8%	+6.5%	+5.1%	-9.2%	+3.7%	+2.9%	-4.1%	-6,6%	17,1%	-0,53
2023	36,6%	+0.2%	-2.1%	-0.3%	-0.3%	-1.0%	+1.3%	-1.5%	+0.1%	-3.7%	-0.7%	+7.3%	+1.8%	+0,7%	9,4%	-0,49
2024	38,4%	+0.5%	+0.2%	+1.6%	-0.4%	+0.4%	-0.1%	+0.7%	0.0%	-0.4%	-0.2%	+0.9%	-1,9%	+1,3%	3,0%	-1,24
2025	58,8%	+0.6%	+4.5%	-3.3%	+1.6%	+1.7%	-0.2%	+0.2%	+2.7%	+2.1%	+3.7%	-0.01%	+0.4%	+14,8%	7,1%	1,51
2026	69,9%	+5.8%	+1.1%											+7,0%	11,3%	0,56

Given its dynamic, opportunity-driven mandate and its wide investment universe, the portfolio does not have a reference benchmark³ upon which to calculate the alpha.

Fund Information

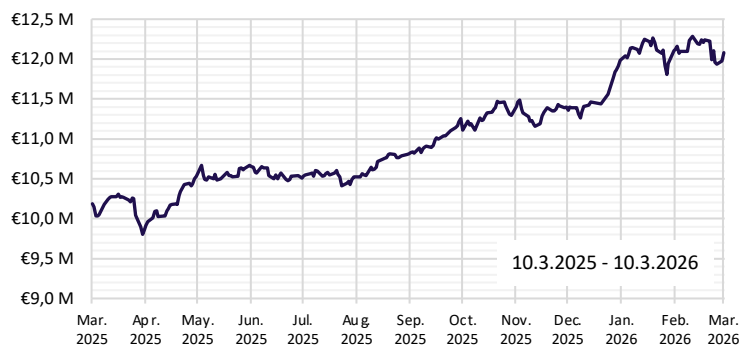
Fund Inception	Jan 2020
Fund AuM 10.03.2026	€12.08m
Strategy	Multi Asset
Geography	Global
Ultimate Decision Maker	Portfolio Manager

Key Statistics (ITD)

Ann. Return	9.0%
Ann. Volatility	6.9%
Beta⁴ to STOXX 50	0.37
Beta⁴ to S&P 500 (EUR)	0.47
Beta⁴ to MSCI China (EUR)	0.14

Key Statistics (1Y)

Return	7.0%
Ann. Volatility	11.3%
Sharpe Ratio¹	0.56
6m Turnover	44.0%
12m Turnover	94.0%



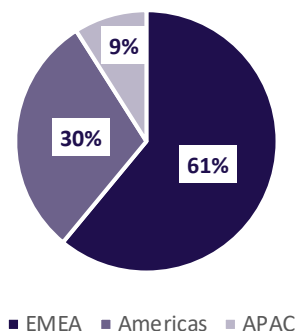
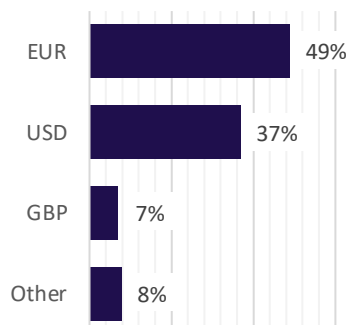
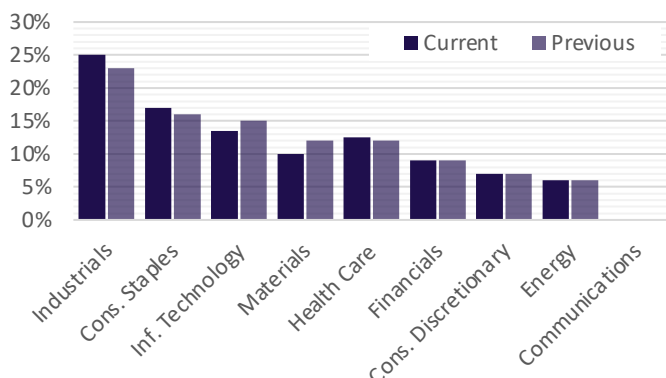
Update On Performance

From 28.11.2025 to 10.03.2026, portfolio NAV increased from €11,393,293 to €12,082,922. This is a 6.1% return, equivalent to 23.7% annualized in EUR. The fund's YTD return stands at 7.0%, exceeding the Euro STOXX 50, the S&P 500, and the MSCI China in EUR terms. This outperformance has been accompanied by weaker risk-adjusted metrics, as 1-year volatility increased to 11.3% and the Sharpe ratio declined to 0.56, reflecting high-conviction positioning in a more concentrated portfolio with greater exposure to correlated markets.

Methodological Note

The analysis considered the cumulative gain over the entire period since inception. Stock dividends are reinvested at the end of the day in which payments are received. The fund value is measured at the close of each trading day. Corporate events, dividend reinvestment and fund rebalancing are carried out at the market close.

Portfolio Breakdown by Sector⁵, Currency⁶, Geography⁷



1. ITD: Inception-to-date. Inception = 31/1/2020, Date = 10/03/2026.

2. Sharpe Ratio computed with US 3-Months Treasury Bills Yields as risk-free rate proxy.

3. Considering multi-strategy absolute-returns (HFRI index) would be the best proxy, but still far from our long-only no-leverage strategy.

4. Computed over monthly returns ITD.

5. Sector breakdown among solely equities.

6. USD includes also HKD (link through band). EUR includes DKK (pegged).

7. Commodities are excluded since prices are determined by global factors.



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Rebalancing Rationale & Details

As per fund approach, every 6 months the portfolio is rebalanced. We monitor the evolution of our securities' prices in depth, and when they have reached our target or we recognize that they are positioned sub-optimally due to changing economic conditions, we substitute them with other securities that have higher potential.

Equities

We assessed equities across geographic region and sector, specifically focusing on assets where narrative themes have changed due to recent macroeconomic or reporting developments. This has resulted in a rebalancing in favour of assets with strategic scarcity and more dependable policy-anchored demand (e.g. Novo Nordisk, Leonardo, and Cameco), and a rebalancing away from previously overweighted assets with higher tail risk from policy intervention, geopolitical opacity, and poor earnings visibility. Consequently, we have reduced our exposure to China and the renminbi where weaker growth signals and higher geopolitical uncertainty raise the risk that policy-driven actions weaken the link between fundamentals and returns.

Fixed Income

We are rebalancing the fixed income sleeve with the following goal in mind: reduce our concentrated exposure to Eurozone duration, and reduce our duration to derisk as rising inflation expectations elevate term premia. While high-quality duration can hedge growth downside, we are motivated to reduce our reliance on Eurozone spread compression and our sensitivity to the portfolio's 10-year node. Accordingly, we have trimmed our 8% allocation to Spanish Bonos to 4% and reallocated into a shorter UK Gilt and a US Treasury. Our rationale boils down to lowering Eurozone-specific tail risk while adding higher-quality developed-market duration that stabilises the portfolio as equity volatility rises and growth risks materialise.

Commodities

We maintained the same exposure to commodities this rebalancing. With only two holdings in Uranium and Physical Gold totaling a 9% portfolio weight, our conviction reflects the stability of our long-term predictions.

Nuclear power remains a long-term global necessity due to augmented global energy requirements and the persistent push for more sustainable energy sources. Gold's unique positioning as a 'safe-haven' asset remains a core portfolio anchor amid a shift in the global order and elevated macroeconomic uncertainty. Both Uranium and Physical Gold provide the portfolio with a structural hedge against the compounding uncertainties of central bank policy divergence, geopolitical fragmentation, and transitioning energy markets - precisely the environments our six-month outlook anticipates.

↗	New Position Added
+	Weight increase
↘	Position Closed
-	Weight Decrease
=	Weight Unchanged despite Consideration

Assets Entries, Weight Increases

↗	+3.0%	UK Gilt 4.25% 07-JUN-2032
↗	+3.0%	US TRSY 4.25% 15-AUG-2035
+	+1.0%	Novo Nordisk
+	+1.0%	Leonardo S.p.A
+	+0.5%	Cameco Corporation

+8.5% Total

Other Assets Analysed, Weights Held

=	5.0%	Gold
=	2.5%	ENAV S.p.A
=	2.5%	Nutrien Ltd
=	1.0%	Adyen N.V

Assets Removals, Weight Reductions

↘	-2.0%	IQVIA Holdings Inc.
↘	-1.75%	Shenghe Resources Ltd
-	-4.0%	Spain Bonos 3.45% 31-OCT-34
-	-0.75%	ASML

-8.5% Total

Equity Portfolio Concentration

# Stocks	% of Portfolio	% of Equity Sleeve
Top 5	16.75%	31.0%
Top 10	29.25%	54.2%
Top 20	48.0%	88.9%

Our View For The Next Six Months



Major CBs to hold rates due to persistent inflationary pressure owing to continued conflict in the Middle East.



Continued AI and defence narratives contributing to further market concentration despite perceived overvaluation.



Energy supply risk anchoring commodity volatility



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Cameco Corporation

Ticker	Currency	Sector	PnL ¹	Δ Weight
CCJ	USD	Energy	+74,0%	+0.5%

Cameco is one of the largest publicly traded uranium producers globally and operates across multiple stages of the nuclear fuel cycle, including mining, refining, conversion, and fuel services.

Rebalancing Thesis:

From both a medium and long-term perspective, increasing the weight of Cameco's stock provides exposure to further gains in uranium prices, despite the high valuation multiples (EV/EBITDA of ~64). The positive market outlook, due to structural supply constraints and growing demand for nuclear energy, combined with Cameco's strong financial performance, presents a solid justification for keeping both our uranium exposure (4%) and adding to our Cameco position. While there are downside risks due to the stock's strong sensitivity to volatile uranium prices, the long-term outlook remains compelling.

Core Analysis:

The macro outlook for nuclear power has improved significantly, as it is increasingly viewed as a reliable, low-carbon baseload energy source amid decarbonization efforts, energy security concerns, and rising electricity demand from AI data centers. Importantly, uranium supply is structurally constrained as new mines often require more than a decade to develop, limiting the industry's ability to quickly respond to demand increases and supporting a constructive uranium price outlook. Moreover, long-term contracts provide Cameco with downside protection in the near term in case of a bear scenario, but also cap immediate gains from an upside in uranium spot prices. Financially, Cameco's recent performance has been strong: revenue increased by 11%, net earnings rose by 243%, operating income grew by 21%, and EPS surged by 237.5%. However, part of this disproportionate earnings growth was driven by contributions from the Westinghouse project (49% stake), as well as derivatives gains in 2025 (compared to derivatives losses in 2024), suggesting that not all recent profitability expansion is purely operational, but according to Cameco, the outlook for Westinghouse's CAGR for adjusted EBITDA remains 6% to 10% over the next five years.

Considerations:

The main upside catalyst would be a sustained increase in uranium prices driven by tightening supply and continued support for nuclear energy. Kazatomprom (the largest uranium producer) has cut 2026 nominal production level by 10%, while undertaking a large-scale exploration to replenish its resource base. For Cameco, a tighter supply environment supporting higher uranium prices could lead to improved long-term contracts. Moreover, positive developments from the Westinghouse segment, such as the announced strategic partnership with the US government, targeting at least \$80bn worth of new nuclear reactors, would further improve earnings.

Even though the thesis would be challenged if uranium prices decline due to nuclear fuel policy reversals, higher demand for alternative sources of energy or faster-than-expected supply growth, the company remains well positioned to benefit from current industry conditions.

Novo Nordisk S.A.

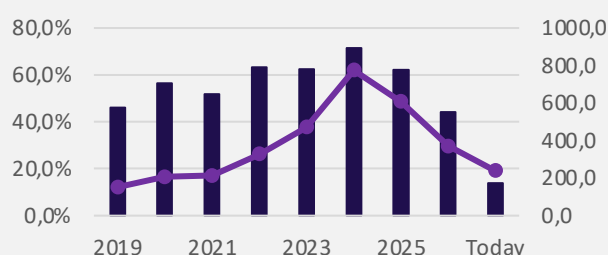
Ticker	Currency	Sector	PnL ¹	Δ Weight
NVO	DKK	Health Care	-15.3%	+1.0%

Novo Nordisk is a Danish pharmaceutical company focused on diabetes, obesity, and other chronic disease treatments, with a global leadership position in insulin and GLP-1 therapies.

Rebalancing Thesis:

For the last few years Novo's stock price dropped significantly reinforcing a loop of negative feedbacks for investors' sentiment. Although the drop was initially justified by both a slight reduction in the speculation levels and loss of market share to competitor Eli Lilly, this created a narrative comfort effect and hindsight bias in investors' perception that paired with recent bad news (amplified in our opinion by availability heuristic) has generated a heavy mispricing opportunity.

Growth value/price (left), and DKK price (right)



Core Analysis:

The current 1.8% growth rate implied in the price indicates that the market is foreseeing a permanent loss of dominance. This is an unlikely scenario: obesity is projected to affect 1.53 billion adults by 2035 and, even considering potential future loss of market share, the structural demand for metabolic therapies requires extensive production capacity that only Novo Nordisk and Eli Lilly can offer given the high capital requirements and technical know-how needed.

And this assumption of a significant loss to market share appears especially strenuous when considering the 100 years of expertise and Novo's 50% EBITDA margin alongside continued disciplined strategic expansion. In our eyes this creates a sufficient manufacturing moat to secure at least part of the overall market growth. Moreover, the 50% dividend payout ratio further compensates investors allowing them to diversify in other opportunities offering downside protection.

Considerations:

Key catalysts are the Q1 2026 start of the Phase 3 AMAZE trial for zenagamtide (amycletin), aiming to deliver injectable-level weight loss in a simpler oral format. At the same time, the early 2026 US launch of the Wegovy pill could drive near-term growth by offering a needle-free option to patients who avoid injections.

The company is currently sharpening financial discipline and focusing capital on its core obesity and diabetes growth drivers. However, risks lie in the operational execution of the plan carried out by the newly appointed board and following the DKK8bn restructuring that led to 9 thousands jobs being cut.

1. PnL of an asset is calculated as capital gains (without dividends reinvested) from Entry (see Full Asset Disclosure) to Date = 10/03/2026.

Leonardo S.p.A				
Ticker	Currency	Sector	PnL ¹	Δ Weight
LDO	EUR	Industrials	+50.0%	+1.0%

Leonardo is an Italian aerospace and defense group supplying aircraft, electronics, and cyber-security systems. It's majority shareholder is the Italian government, and is the largest defense contractor in the EU.

Rebalancing Thesis:

Leonardo delivered a clean beat across every FY2025 metric: orders +14.5% to €23.8bn, EBITDA to €1.75bn, FOCF clearing €1bn, and net debt nearly halved to €1bn - while trading at 18x EV/EBITDA, a significant discount to competitors. Catalysts are both structural and medium-term as the US-Iran conflict drives order flow and Western allies increased defence budget. The 1-year outlook is "BUY", with fair price calculated at €70.

Core Analysis:

In FY2025, Leonardo delivered results ahead of guidance across all major metrics, with revenues increasing 10.9% to €19.5bn, exceeding the €18.86bn consensus, and orders rising 14.5% to €23.8bn as stated. EBITDA grew strongly by 18.2% to €1.75bn, while Free operating cash flow (FOCF) exceeded the €1bn threshold, up 20.5% year-on-year. Conclusively, net debt declined by 44% to €1bn, reflecting significant balance sheet deleveraging. Further important remarks from the CEO Roberto Cingolani include, promising further increase in dividends to 20%, thanks to strong FCF conversion. Moreover, Leonardo trades at 17.5x EV/EBITDA and 27.5x forward P/E, a substantial discount to competitor Rheinmetall (38x EV/EBITDA, 45x P/E NTM) and in line with competitors like BAE Systems and Thales. This discount historically reflected Leonardo's lower profitability and Italian political risk. However, expanding EBITDA margins, halved net debt, and free cash flow solidity suggest a re-rating to a still-conservative 20x NTM EV/EBITDA. The latter, applied to 2026E EBITDA of €2.05bn, implies a €40bn EV. Stripping out net debt (€1bn) and dividing by shares outstanding we arrive at a fair value around €70 per share.

Considerations:

Leonardo could benefit from the US-Iran conflict. It supports Israel's Ministry of Defence and is positioned well as Europe gradually reduces reliance on non-EU suppliers. Indeed, the heightened conflict is leading Western allies to boost budgets. This is especially relevant since Leonardo acts as a core partner in the GCAP, a trilateral partnership between UK, Italy, and Japan. Moreover, on March 2, 2026, the UK Ministry of Defence awarded on competitive terms against Airbus a £1bn contract to Leonardo for 23 new "AW149" Helicopters; credibility signs the market may have not yet fully priced. This will boost earnings power by increasing multi-year production volume, generating long-term, high margin "Service & Support" revenues, extending beyond the initial delivery. Also, by June 2026 Leonardo is expected to sign a 50-50 joint-venture accord for its aerostructures' unit with a financial partner, eyeing a market three times larger than the one pursued by Leonardo's division. However, being a state-controlled company, Leonardo's Board of Directors is expected to change every three years, envisaging a new CEO for this new term. Change is expected to take place around May 2026 shedding doubts over new management.

Nutrien Ltd				
Ticker	Currency	Sector	PnL ¹	Δ Weight
NTR	CAD	Materials	+49.0%	=2.5%

Nutrien is the world's largest fertilizer producer, operating across Nitrogen, Potash, Phosphate, and agricultural retail services segments.

Rebalancing Thesis:

We recommend maintaining our current 2.5% portfolio weighting in Nutrien. The company's financial recovery in FY2025 provides a credible foundation for continued normalization. Tailwinds from demand in the US and key South American markets, particularly Brazil, reinforce the thesis. However, near-term risks from natural gas price volatility and tariff uncertainty temper our enthusiasm for adding. The risk-reward balance supports holding rather than increasing the position.

Core analysis:

Nutrien has a highly integrated business model that mitigates spot price risk. FY2025 confirmed a meaningful operational recovery: net margins improved to 8.43% from 2.60%, operating margins rose nearly 7 percentage points to 13.90%, and interest coverage recovered from 2.58x to 5.44x. Total nutrient volumes rose to 27.5m tonnes, Retail adjusted EBITDA grew to \$1.74bn, and capital returns improved through buybacks and a higher dividend of \$2.18 per share.

A key structural tailwind is the fertilizer supply disruption stemming from escalating Iran-US tensions. Roughly one-third of the global fertilizer trade passes through the Strait of Hormuz. Major exporters of urea and nitrogen-based fertilizers, like Egypt and Oman, are all exposed to potential shipping disruptions and Iranian retaliation. US agricultural demand remains robust, and South American markets, notably Brazil, are showing consistent volume growth, further absorbing available supply. However, the same conflict will drive natural gas prices higher: Qatar's LNG facilities, a critical source of global gas supply, have already been targeted, raising the cost of ammonia production directly. As gas is the primary feedstock for nitrogen fertilizers, a sustained price hike would compress Nutrien's margins and offset the pricing benefit of tighter Middle Eastern supply.

Valuation is nuanced. A TTM P/E of 19.61x appears elevated versus peers Mosaic (7.38x) and CF Industries (11.62x), but this premium reflects depressed trough earnings rather than overvaluation. EV/EBITDA of 7.67x suggests mid-cycle pricing, indicating fair value rather than a compelling entry point.

Considerations:

The key downside risks are that tariff uncertainty, which management has explicitly flagged, could push US farmers to delay purchases, and that a spike in natural gas prices would compress nitrogen margins and reverse FY2025 profitability gains. Softer-than-expected potash pricing would further reset EBITDA expectations. This hold is wrong if potash tightens enough to drive a material earnings step-up, if gas prices remain benign and margins keep normalizing, or if strong retail performance and Brazilian demand reduce earnings volatility and justify a higher through-cycle multiple. Given these balanced risks, we maintain the 2.5% weighting.

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Adyen N.V				
Ticker	Currency	Sector	PnL ¹	Δ Weight
ADYEN	EUR	Financials	-34.5%	=1.0%

Adyen is a Dutch payments-technology company providing a single-stack payments platform to process global payments.

Rebalancing Thesis:

Adyen remains a high-quality platform with durable enterprise switching costs, but the near-term setup is dominated by pricing optics and competitive narratives. We recommend maintaining our exposure while waiting for clearer confirmation that growth quality remains intact and that reinvestment is translating into measurable product outcomes rather than being competed away in enterprise renewals. Context anchors: revenue scaled from €1.0bn in FY21 to €2.4bn in FY25, with FY25 EBITDA margin in the low-50s and capex around 5 percent. Valuation context: a cash-flow based anchor points to around €1.1k per share, while processor peer multiples imply a more conservative floor around €0.7k per share. The gap between these anchors explains why we prefer to hold our today: the upside exists, but we want the next evidence point to reduce uncertainty around pricing before taking further risk.

Core Analysis:

Adyen operates an integrated stack across gateway, acquiring, risk and reconciliation, serving global enterprise merchants and platforms where reliability and total cost of ownership matter more than time to integrate. This positioning creates switching costs and supports structurally high profitability. The debate concentrates on two variables: pricing and take-rate discipline in enterprise RFPs, and the reinvestment versus operating leverage trajectory; if discounting intensifies, revenue yield can compress even if volumes grow. Competition is bifurcated: Stripe leads on developer speed, Checkout.com can be aggressive on large deals, and incumbents have distribution but often fragmented stacks. Adyen is advantaged where procurement prioritises reliability, global compliance and optimisation outcomes over headline price, supporting retention and a quality multiple. Valuation grounding: Adyen trades at a premium to processor-heavy peers on EV/EBITDA (16.19x against 12.84x peer average) because the businesses have different economics and Adyen is priced for quality; peer medians (7.03x) imply a materially lower value than a cash-flow based anchor, which supports HOLD until the next evidence point de-risks pricing optics and confirms that reinvestment remains disciplined. From a portfolio perspective, the goal is to keep exposure to a structurally attractive compounder while avoiding an upgrade that would be driven by narrative rather than confirmed fundamentals.

Considerations:

The primary upside catalyst is the next results cycle confirming stable growth quality and reassuring commentary on pricing discipline. The primary downside catalyst is sustained take-rate compression in enterprise renewals or the loss of a major enterprise customer that forces a base-case downgrade, with risk-off multiple compression as an additional headwind.

ENAV S.p.A				
Ticker	Currency	Sector	PnL ¹	Δ Weight
ENAV	EUR	Industrials	+32.4%	=2.5%

ENAV is Italy's air-traffic management operator, providing aviation and control services for national airspace.

Rebalancing Thesis:

ENAV has been maintained in the portfolio at an unchanged allocation of 2.5%, reflecting its strong defensive characteristics and stabilizing role within the overall asset allocation. Operating under a regulated framework, the company benefits from predictable revenues and high earnings visibility. Moreover, ENAV offers relatively high and progressively growing dividends, providing attractive flexibility and security to our portfolio. The upcoming earnings publication on 23/03/2026 is expected to clarify the sources and sustainability of future free cash flows, which remain essential to assessing this asset for potential further upside.

Core analysis:

The most relevant financial development in 9M 2025 was the marked increase in free cash flow, which rose to €197.6mn (+51.3% YoY). This performance was primarily driven by working-capital dynamics, notably the reduction in COVID-related balance receivables (+€170m to FCFO). Furthermore, the €106mn increase in Eurocontrol receivables not yet due at period-end supports further prospective cash inflows. At the same time, shareholder remuneration remains substantial, with dividends of €124.5mn in FY2024 and €146.1mn expected in FY2025 (+17.3% YoY). Despite this, dividend growth remains more moderate than FCF expansion, reflecting prudent capital allocation.

Importantly, ENAV achieved meaningful deleveraging despite elevated distributions: net financial debt declined to €205.3mn from €258.3mn at year-end 2024 (-20.5%). The ability to reduce leverage while maintaining high dividends underscores the strength and resilience of underlying cash flows. Although total revenues (-2.9% YoY) and EBITDA (-19.1% YoY) declined, this largely reflects regulatory effects and temporary non-regulated weakness. Moreover, revenue from operations increased 10.6%, confirming solid underlying traffic and operational performance.

Considerations:

ENAV benefits from a supportive structural backdrop. Indeed, European air traffic has now recovered to, and in some areas exceeded, pre-pandemic levels, with Italy among the strongest Southern European markets thanks to leisure flows and Mediterranean overflights. The multi-year European regulatory framework (RP4) further strengthens visibility. Defined WACC parameters and cost-recovery mechanisms reduce volatility and provide predictable cash flows, enhancing valuation stability relative to competitive industries.

At the same time, technological modernizations are improving efficiency and competition in the complimentary goods of ATM software and drone traffic management. Combined with high barriers to entry and structural supply constraints, ENAV's long-term positioning appears resilient and defensible.

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ASML Holding N.V.

Ticker	Currency	Sector	PnL ¹	Δ Weight
ASML	EUR	Information Technology	+67.2%	-0.75%

ASML is the sole global supplier of EUV lithography systems used in cutting-edge chip manufacturing.

Rebalancing Thesis:

The best course of action is trimming ASML to a smaller position size. The underlying business quality remains exceptional, but the stock is priced for a very strong execution at a time when near-term outcomes are likely to be nosier than the valuation implies. ASML is trading at very high ratios of 46.22x P/E vs ~33x ASML's 1-yr average and 35.32x EV/EBITDA vs ~30x ASML's 5-yr average which combined with the fact that the next major high-volatility point being the April earnings release, it creates a meaningful risk of near-term sell-off. This is because even if ASML reports numbers that are broadly consistent with the recent growth trend, it can trigger sentiment changes. Therefore, the suggested trim is a risk-management decision, not a change in long-term conviction.

Core Analysis:

ASML's positioning as the essential supplier of EUV lithography machines grants it a strong competitive advantage observable in the financials. The company shows €32.67bn of revenue and €12.27bn of EBITDA, supported by a ~52.8% gross margin and ~29.4% net profit margin on a trailing basis. Returns also support this as ROE is ~50.5% and ROA is ~19.4% which is consistent with high-value products and strong pricing power rather than a typical cyclical industrial profile. This suggests that the key swing factor for equity holders is valuation and demand timing. The problem is that the market is already paying for that quality upfront. Alongside the premium earnings multiple, ASML is valued at ~14.55x price-to-sales, ~22.5x price-to-book and it has a low cash yield (0.65% dividend yield). In this setup, the stock is very sensitive to expectation changes, and steady execution may not be enough to support the current price.

Considerations:

The key downside risk is that ASML is being valued as if the next quarters will be smooth leaving the stock highly sensitive to any uncertainty from guidance tone or policy headlines. Export-control and China-related news can affect sentiment quickly because the stock (having high multiples) is priced on confidence and visibility and thus the market often reacts more abruptly to variance. The most likely instance for a sentiment shift is April earnings release, mainly because it's the first major 2026 guidance reset using fresh Q1 order data. The risk is that guidance exposes timing noise from China normalization and/or that High-NA rollout isn't a predictable ramp. However, this would be wrong if the earnings create new upside potential, for instance customers raise leading-edge capex plans on stronger AI/data-centers and ASML is able to show faster backlog conversion/earlier High-NA adoption that pulls EUV demand forward. That would justify keeping a premium valuation also because the business economics already support it. Until then, the valuation structure (high P/E and EV/EBITDA multiples, low dividend yield) makes the risk-reward skewed.

IQVIA Holdings Inc.

Ticker	Currency	Sector	PnL ¹	Δ Weight
IQV	USD	Health Care	-10.7%	-2.0%

IQVIA has two main businesses: 1) R&D services, which takes care of the execution of clinical trials on behalf of pharmaceutical companies, and 2) Technology and Analytics Solutions (TAS), which is composed of data gathering and analysis, SaaS, and consulting to pharmaceutical companies.

Rebalancing Thesis:

Overall, we believe IQVIA to be a good business, positioned in an interesting market, but at the wrong market price. Its fundamentals are strong and healthcare data is increasing in value every year. However, even if analysts expect a decrease in residual earnings of 4%, the current stock price implies a perpetual growth of 6.86%. Based on our expectations about the sector, it is unlikely that the company will manage to grow residual earnings at that pace.

Core analysis:

The R&D services segment in 2025 had an EBITDA margin of 21% and has grown for the past two years at low single digit. The overall market for clinical trials is expected to grow at 6.5% CAGR until 2035 and IQVIA seems well positioned to benefit from the growth. Moreover, the R&D benefits from an already secured backlog that always covers the next twelve months.

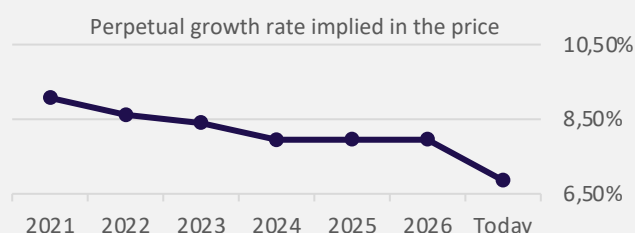
The TAS segment is quite diverse in terms of sales mix. It has an EBITDA margin of 24% and its sales have grown at mid single digit (at constant exchange rate) over the past years. Although we expect the value of healthcare data to increase over time, we still see this as a difficult market in which to achieve high growth. Moreover, sales from data-providing services accounts for only 12% of the total sales and this growth could be compensated by high uncertainty around the SaaS segment which accounts for 10% of revenues.

Overall, the company achieved a Return on Net Operating Assets of 10.55% in 2025, covering only by half a point our required return on investment.

Considerations:

The upside risk regarding the short-term variations of price, is that good news regarding the extremely rapid changing pharmaceutical market could spark again interest and speculation in healthcare stocks.

However, we believe that the current growth implied in the market price, although being at low levels compared to the past years, is still too high and highly unlikely to occur.



1. PnL of an asset is calculated as capital gains (without dividends reinvested) from Entry (see Full Asset Disclosure) to Date = 10/03/2026.

Shenghe Resources Ltd				
Ticker	Currency	Sector	PnL ¹	Δ Weight
600392.SS	CNY	Materials	+38.7%	-1.75%

Shenghe Resources is a Chinese rare-earths company involved in mining, processing, and recycling materials used in electronics and advanced technologies.

Rebalancing Thesis:

Despite Shenghe's recovery being genuine, the US and Iran war has drastically altered the near-term risk profile. Rising energy costs compress margins; during periods of geopolitical uncertainty investors tend to sell their most speculative holdings first, and with financial ratios indicating the recovery premium has already largely been priced in, the 4-month outlook is to Sell.

Core Analysis:

Shenghe sits at the midstream of the global rare earth supply chain, processing PrNd oxide and NdFeB magnet. Its ~34% state-linked ownership grants preferential access to production licenses, export approvals, and state-backed financing, advantages private competitors cannot replicate. However, Beijing has shown it will deliberately sacrifice Shenghe's profitability when it serves broader national interests, as demonstrated by the 2023–2024 production expansion that collapsed PrNd prices. Shenghe's operational recovery from 2024 is impressive. Gross margin recovered from 4.76% to 9.51% TTM, ROE from 2.41% to 7.60%, and 9M net income of ¥901.93M already exceeds FY2023's full-year result. However, this has not translated into cash generation with FCF deteriorating from +¥139M in FY2022 to –¥834mn TTM, driven by heavy capex figures and funding the AU\$158mn Peak Rare Earths acquisition. Most concerning, dividends were paid at 113.45% of FY2024 net income, exceeding total earnings. Furthermore, At 52x EV/EBITDA meaningfully above the industry average at 12.38x, the recovery premium is already fully priced in. In regard to geopolitical tensions, the US-Iran war disrupts the investment case in three ways. First, higher oil prices increase energy input costs, directly compressing the margins that justified the re-rating. Second, investors will reduce exposure to their most speculative positions during periods of uncertainty; Shenghe, up ~250% from its lows on a recovery narrative with negative free cash flow, is a natural first exit. Third, and most critically, if China retaliates through export license restrictions on rare earths targeting Western buyers this directly cuts Shenghe's international revenue.

Considerations:

The primary downside catalyst is an escalation of Chinese export controls on rare earths targeting Western buyers in retaliation to the Iran conflict, which would reduce Shenghe's international revenues and compress the geopolitical premium. A production quota expansion at the June 2026 biannual decision would simultaneously pressure domestic PrNd prices and accelerate the re-rating lower. On the upside, a swift resolution to the Iran conflict, a confirmed FY2025 full-year OCF recovery above ¥600M or a domestic production quota tightening would challenge the current Sell position.

Gold				
Ticker	Currency	Sector	PnL ¹	Δ Weight
XAU	USD	-	+116.6%	=5.0%

Rebalancing Thesis:

Gold is held primarily as portfolio insurance rather than a carry asset. We are cautiously constructive and expect mild appreciation over the next four months because geopolitical and policy uncertainty remains elevated and official-sector demand continues to provide a durable floor. However, given the opportunity cost of positive real yields and the risk of sharp pullbacks at elevated prices, we recommend HOLD the current 5 percent allocation rather than adding. Price objective is Gold price plus 3 percent over the horizon, consistent with a hedge that protects the portfolio in market stress rather than maximise return.

Core Analysis:

Gold's return profile is macro and positioning driven, with key sensitivities to US real yields, the US dollar, and the intensity of geopolitical and policy uncertainty. For this horizon, gold behaves like a long-duration asset with no cash flows: when real yields fall, the opportunity cost of holding gold declines and prices are supported; when real yields rise, gold typically faces headwinds. Our base case assumes real yields remain range-bound to modestly lower, rather than re-accelerate higher, as geopolitical uncertainty and uneven growth partly offset the effects of still-restrictive policy. This allows gold to grind higher without requiring a full risk-off shock, while retaining its hedging value if equities or credit reprice on geopolitical headlines. On the demand side, official-sector buying remains structurally supportive and helps create a perceived floor even if investment flows oscillate month to month, while investor demand is the main swing factor: exchange-traded flows tend to return when volatility rises or when markets price a more dovish policy path and can reverse quickly in risk-on regimes. On the supply side, mine output and recycling respond slowly to price changes, so short-term supply elasticity is limited and the price is set primarily by macro conditions and flows rather than rapid supply adjustment. We do not increase the allocation because upside is not asymmetrically attractive when real yields are positive and the dollar can re-strengthen quickly; in that regime gold can correct even if the longer-term structural narrative remains intact, and the portfolio would be paying a higher insurance premium. In portfolio terms, the 5 percent weight is sized to dampen drawdowns in adverse scenarios without materially reducing participation in risk-on regimes, and to provide additional protection against currency stress.

Considerations:

The primary upside catalyst is a renewed risk-off episode or policy communication that leads to lower real yields and a softer US dollar, reactivating investment demand, with continued evidence of steady official-sector buying reinforcing the floor. The primary downside catalyst is a sustained rise in real yields combined with broad US dollar strength and weak investment flows, which would reduce hedge efficiency and warrant a sizing review.

1. PnL of an asset is calculated as capital gains (without dividends reinvested) from Entry (see Full Asset Disclosure) to Date = 10/03/2026.

Fixed Income Investments – Due Diligence Summaries

Gilt 4.25% Jun2032

ISIN	Currency	YTM	Modified Duration	Δ Weight
GB0004893086	GBP	4.14%	5.38y	+3.0%

Rebalancing Thesis:

Time Horizon: 6-18 months. The UK Treasury Gilt 4.25% Jun 2032 allows to diversify our current exposure, reducing the excessive dependence on EU, while obtaining a good yield. This bond has a maturity that offers a good compromise between yield and interest rate sensitivity, guaranteeing good returns while minimizing risk.

Core Analysis:

The inclusion of this Gilt perfectly meets the team's objective of diversifying the portfolio geographically and in terms of currency, reducing direct exposure to energy inflation risks specific to the European continent. I opted for a shorter duration, compared to the one previously adopted by the fund due to higher uncertainty in interest rates cuts because of the recent developments in Iran. This is especially prescient seeing as the National Institute of Economic and Social Research (NIESR) warns there is upside risk to UK interest rates (estimated above 4%) if energy-driven inflation shocks persist.

NIESR expectations in its February Economic Outlook predict the Bank of England to cut interest rates twice this year, from the current 3.75% level to settle at approximately 3.25%. This could be reversed if the oil and gas price shocks turn out to translate to having permanent inflationary affects. The actual metrics of this bond, with a modified duration of 5.38 years and a convexity of 34.1, perfectly align with the risk of a persistent energy shock and potential rate hikes.

Considerations:

The catalyst supporting this position are the need for diversification combined with the attractive yields of UK gilts. This duration is optimal since it allows to obtain a good yield, without taking an excessive sensitive position to interest rates spikes. The falsifier are related to an increase in interest rates by the UK bank, while the ECB keeps the rates constant, resulting in lower gilt prices.

Treasury 4.25% Aug2035

ISIN	Currency	YTM	Modified Duration	Δ Weight
US91282CNT44	USD	4.11%	7.67y	+3.0%

Rebalancing Thesis:

We purchase this Treasury with a 12-24 month time horizon. This US Treasury offers attractive real yield potential relative to inflation expectations, and provides high-quality duration exposure in a late-cycle macro environment where growth risks are skewed to the downside, all offered alongside necessary geographical and currency diversification.

Core Analysis:

This Treasury note, exhibiting a modified duration of 7.67 years and a convexity of 66.2, fits perfectly within our diversification strategy. With policy rates having reached restrictive territory over the past tightening cycle, the Federal Reserve is closer to the end of its hiking phase than the beginning. While inflation remains above the long-term target, disinflationary forces (such as a moderate wage growth, tighter credit conditions, and slowing consumer demand) suggest limited upside pressure on long-term yields from current levels.

The 10-year area of the curve (where this 2035 maturity broadly sits) offers a balanced risk-return profile. It captures meaningful carry without the excessive convexity risk of ultra-long bonds (20–30 years). Compared to shorter maturities, it provides stronger price appreciation potential in a scenario of economic slowdown or earlier-than-expected rate cuts. Additionally, if presiding FED Chair Powell is substituted by a new more dovish FED chair (potentially Warsh), economic growth and low unemployment may be prioritized over low inflation, increasing the likelihood of new rates cuts. The combination of an attractive yield, together with an almost null default risk and a well-balanced duration makes this bond a great investment opportunity.

Considerations:

The main catalysts of this investment are a dovish turn in Federal Reserve forward guidance over the next 6–12 months, alongside a volatile stock market supporting demand for high-quality duration. In the February 2026 FOMC minutes, several participants noted that further rate cuts would likely be appropriate if inflation cools. This view is broadly consistent with futures markets that are pricing a limited easing over the next months. The falsifier is a reacceleration of inflation driven by war-related supply shocks and a continued closure of the Strait of Hormuz, forcing the Fed to pause easing.

1. PnL of a bond is calculated as total return (including coupon) from Entry (see Full Asset Disclosure) to Date = 10/03/2026.



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Spain 3.45% Oct34 EUR					
ISIN	Currency	YTM	Modified Duration	PnL ¹	Δ Weight
ES0000012N35	EUR	3.24%	7.3y	+3.5%	-4.0%

Rebalancing Thesis:

Time Horizon 6-12 months. The current strategy involves optimising the bond portfolio by reducing this present exposure; whose 8% weighting is disproportionate compared to the composition of other securities. This 4% trim removes approximately 332.77 DV01 for each basis point of movement in the curve. This significantly limits exposure to the 10-year node which represents the portfolio's point of greatest sensitivity, especially relevant considering the oil crisis developing around Hormuz.

Core Analysis:

The Spanish Bonos has a modified duration of 7.30 years, a convexity of 63.5 and a DV01 of approximately €0.0741 per 100 nominal. At the current price of 101.54, the security appears rich relative to its historical valuation profile and offers limited compensation for the macroeconomic risks now emerging in the Eurozone. In particular, current pricing does not adequately reflect the possibility of a misalignment in European monetary policy at a time when external energy shocks linked to Hormuz are becoming increasingly material.

Meanwhile, the position in other European issuers, such as Italy, is maintained in line with the latest report, supported by improving fiscal stability and a more constructive domestic outlook. Reducing the Spanish allocation releases capital for redeployment into non-EU assets. This geographical diversification adds higher convexity and stronger safe-haven characteristics to the portfolio, both of which are critical in an environment of potential imported inflation and volatile real rates.

Considerations:

The main catalyst for this move is the urgent need to mitigate the idiosyncratic and inflationary risk in the Eurozone, while simultaneously financing entry into non-EU markets. This thesis would be falsified by a rapid resolution of the energy crisis in the Middle East, leading to a sudden deflationary shock in the Eurozone, forcing the ECB to cut rates much more drastically than other central banks and consequently pushing Bonos to outperform.

1. PnL of a bond is calculated as total return (including coupon) from Entry (see Full Asset Disclosure) to Date = 10/03/2026.

Fixed Income Investments – Quantitative Framework

Introduction

The objective of this section is to quantify how the EUR gov fixed income portfolio's sleeve responds to changes in interest rates. We model each bond as a stream of deterministic cash flows and view the portfolio's value as a function of the underlying yield curve.

The analysis proceeds in two steps:

- **Bond-level risk:** we estimate the modified duration of each security from its current market price, capturing the sensitivity of that bond to a parallel change in yields.
- **Curve-level risk:** we construct a continuous zero-coupon yield curve for the portfolio currency and compute key-rate sensitivities (first- and second-order) to moves at selected maturities.

All results are expressed in relative terms (percentage change in portfolio value) rather than in nominal euro amounts. This makes the outputs directly comparable over time and across different portfolio sizes.

Bond-level Modified Duration

For each bond we model cash flows CF_j at times t_j (in years) and infer the yield-to-maturity y from the current price P , where m is the coupon frequency. Solving this equation for y allows us to compute:

$$D_{Macaulay} = \frac{1}{P} \sum_j t_j \frac{CF_j}{\left(1 + \frac{y}{m}\right)^{(mt_j)}}; \quad D_{Modified} = \frac{D_{Mac}}{\left(1 + \frac{y}{m}\right)}$$

Modified Duration is the first-order sensitivity of price to a small parallel change in yield:

$$\frac{\Delta P}{P} \approx -D_{Mod} \Delta y$$

The modified maturity of each bond gives a sufficiently good approximation to understand in relative terms how sensible to rates movement a bond actually is, allowing us to identify concentration in particular maturities.

Portfolio Yield Curve risk

To estimate returns of the bond set as whole in different scenarios, given the diverse maturities included in the fixed income portfolio, we do not accept the parallel movements assumption, which comes with the definition of modified duration.

Therefore, we consider the portfolio as a function of the yield curve, taking into account the convexity of each bond and allowing non-parallel movements of the curve.

Let the continuous discount EUR rate curve be defined by zero rates at some key maturities with corresponding key tenors $T_1, \dots, T_K$ (e.g. 3y, 5y, 7y, 10y, 15y).

The continuous curve by linearly interpolating zero rates in maturity and converting them to discount factors:

$$DF(t) = -e^{-r(t)t}$$

Each bond's price is obtained by discounting its cash flows with this curve. The portfolio present value PV is the sum across bonds, using position sizes implied by the allocation weights.

For risk analysis we define scenario key rates at 3, 5, 7, 10 and 15 years. We then apply a bump-and-reprice procedure. For each key rate k , we shift the corresponding zero rate up and down by 1 bp, rebuild the curve and reprice the portfolio. From the resulting values we estimate, for each key rate k :

- *first-order sensitivity* (slope to the key rate)

$$D_k \approx \frac{\partial PV}{\partial r_k}$$

- *second-order sensitivity* (convexity in that key rate)

$$Conv_k \approx \frac{\partial^2 PV}{\partial r_k^2}$$

Into vectors: $D = [D_1, \dots, D_K]$, $Conv = [Conv_1, \dots, Conv_K]$

These measures allow us to approximate the portfolio impact of any curve scenario defined as changes Δr_k at the key maturities:

$$\frac{\Delta PV}{PV_0} \approx \sum_k \left(\frac{D_k}{PV_0} \Delta r_k + \frac{1}{2} \frac{Conv_k}{PV_0} \Delta r_k^2 \right).$$

Investment Thesis

Our investment thesis this semester revolves around global interest-rate diversification within a 31% fixed-income sleeve. We expect short-term rates (<7y) to rise modestly as policy normalizes, while staying cautious on the long end (>15y), where elevated inflation expectations could continue to reprice term premia. Our positioning therefore focuses on the 7–10-year segment of the curve, where risk-adjusted carry is still attractive and yield compression is in growth-downside scenarios. Implementation-wise, we express this through the 7–10-year part of the curve, as it offers the best balance between carry and convexity if growth slows and rates ease, while limiting vulnerability to long-end term-premium repricing if inflation expectations remain elevated.

Maturity	Key Rate	First-Order Sensitivity %ΔPV per +1bp	Second-Order Sensitivity %ΔPV per (1%) ²
0.0 – 4.0y	3y	-0.007088	0.007137
4.0 – 6.0y	5y	-0.007845	0.008828
6.0 – 8.5y	7y	-0.017915	0.056714
8.5 – 12.5y	10y	-0.016653	0.062277
≥ 12.5y	15y	-0.007738	0.026700

Yield Curve Scenarios	EUR Rates Changes in bps					Δ% of PV
	3y	5y	7y	10y	15y	
Parallel bear shift	+100	+100	+100	+100	+100	-5.562176
Parallel bull shift	-100	-100	-100	-100	-100	5.885489
Bear steepener	+20	+45	+65	+80	+90	-3.600338
Bull steepener	-20	-45	-65	-80	-90	3.775377
Curve flattening	+40	+10	0	-20	-40	0.288579
Positive butterfly	0	-20	-40	-20	0	1.218458
Negative butterfly	0	+20	+40	+20	0	-1.194621
Positive Case – Inv. Thesis	+10	+5	+5	+15	+20	-0.601523
Neutral Case – Inv. Thesis	+10	+10	+10	+20	+25	-0.850091
Adverse Case – Inv. Thesis	+25	+20	+20	+35	+45	-1.607341



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Full Assets Disclosure of the Multi Asset Global Opportunities Fund

#	Name	ISIN	Weight	Type	Currency	Entry Dates	Entry Price EUR	Notes
1	Cash	-	0.00%	-	EUR	-	-	-
2	Bund 0% Fb32	DE0001102580	6.00%	Bond	EUR	28/04/2025	86.08	
3	Venture Global LNG 7.75% 2035	USU91913AB62	6.00%	Bond	USD	28/04/2025	89.94	
4	Gold	IE00B579F325	5.00%	Commodity	USD	28/04/2025, 30/04/2024, 28/04/2023, 08/04/2020	2064.6	Spot price
5	Leonardo S.p.A.	IT0003856405	5.00%	Equity	EUR	10/03/2026, 24/10/2025, 28/04/2025, 14/11/2024	43.69	
6	Btp 0.45% Fb29	IT0005467482	4.00%	Bond	EUR	26/03/2025	91.72	
7	Btp 2.95% St38	IT0005321325	4.00%	Bond	EUR	24/11/2025	98.11	
8	Romania 2.875% Mz29	XS1892141620	4.00%	Bond	EUR	24/11/2025	92.89	
9	Spain 3.45% Oc34	ES0000012N35	4.00%	Bond	EUR	14/11/2024	103.43	
10	Uranium	IE000NDWFGA5	4.00%	Commodity	USD	24/11/2025, 14/11/2024	31.05	Etc tracking continuous rolling Futures 1m (UXXc1)
11	Novo Nordisk A/S	DK0060534915	3.50%	Equity	DKK	10/03/2026, 24/11/2025	37.02	
12	Oat 1.25% Mg36	FR0013154044	3.00%	Bond	EUR	14/11/2024	81.64	
13	Siemens Aktiengesellschaft	DE0007236101	3.00%	Equity	EUR	24/10/2025, 28/04/2025	217.9	
14	UK Gilt 4.25% Jun2032	GB0004893086	3.00%	Bond	GDP	10/03/2026	100.23	
15	US Treasury 4.25% Aug2035	US91282CNT44	3.00%	Bond	USD	10/03/2026	87.04	
16	ASML Holding N.V.	NL0010273215	2.75%	Equity	EUR	24/10/2025, 14/11/2024, 30/04/2024, 01/12/2022	707.3	
17	Coca-Cola HBC AG	CH0198251305	2.50%	Equity	GBP	24/11/2025	41.97	NOT "The Coca-Cola Company (KO)"
18	ENAV S.p.A.	IT0005176406	2.50%	Equity	EUR	14/11/2024	3.84	
19	Euronext N.V.	NL0006294274	2.50%	Equity	EUR	24/11/2025	129.07	
20	Gerdau S.A.	BRGGBRACNPR8	2.50%	Equity	BRL	24/11/2025	2.99	
21	Nutrien Ltd	CA67077M1086	2.50%	Equity	CAD	14/11/2024	44.05	
22	Philip Morris International	US7181721090	2.50%	Equity	USD	28/04/2023	90.72	
23	Cameco Corporation	CA13321L1085	2.00%	Equity	USD	10/03/2026, 14/11/2024	57.94	
24	Caterpillar Inc.	US1491231015	2.00%	Equity	USD	24/10/2025	449.66	
25	MercadoLibre Inc.	US58733R1023	2.00%	Equity	USD	14/11/2024	1781.77	
26	Miniso Group Holding Ltd	US66981J1025	2.00%	Equity	HKD	28/04/2025	3.79	
27	PT Adaro Andalan Indonesia Tbk	ID1000207509	2.00%	Equity	IDR	28/04/2025	0.368	
28	UnitedHealth Group	US91324P1021	2.00%	Equity	USD	14/11/2024	563.3	
29	Vitec Software Group AB	SE0007871363	2.00%	Equity	SEK	24/10/2025	32.66	
30	XIAOMI	KYG9830T1067	1.75%	Equity	HKD	24/11/2025	4.13	
31	Airbus Group	NL0000235190	1.50%	Equity	EUR	24/10/2025	208.45	
32	Dollar General Corporation	US2566771059	1.50%	Equity	USD	14/11/2024	73.17	
33	Futu Holdings Limited	US36118L1061	1.50%	Equity	USD	24/11/2025	148.89	
34	Imperial Brands PLC	GB0004544929	1.50%	Equity	GBP	28/04/2023	22.45	
35	Adyen N.V.	NL0012969182	1.00%	Equity	EUR	28/04/2025	1440.8	
36	Nu Holdings Ltd	KYG6683N1034	1.00%	Equity	USD	28/04/2025	10.63	
37	Tata Consumer Products Ltd	INE192A01025	1.00%	Equity	INR	28/04/2025	11.88	



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Introduction

The main objective of this section is to assess and quantify the risk embedded in the Minerva IMS Multi Asset Global Opportunities Fund built by the portfolio team. We use a daily perspective on the potential extreme behaviour of a basket of assets selected by the portfolio analysts. The analysis will include three VaR and ES models (two parametric and one non-parametric) and an overview of how sentiment analysis can be considered a factor for short term investments.

As the Quantitative Research division, our focus is the estimation of the two main risk indicators:

- The daily Value at Risk (VaR): the maximum portfolio loss that occurs with $\alpha\%$ of probability over a time horizon of 1 day. For instance, if the VaR ($\alpha=5\%$) = -3.00%, it means that tomorrow there is a 5% probability of encountering a loss in the interval [-100%, -3.00%] potentially;
- The daily Expected Shortfall (ES): the expected return on the portfolio in the worst $\alpha\%$ of cases. So, it is just a mean of the returns lower than the VaR.

A simple technique to estimate these two measure is based on a historical approach: given a time series of returns of a financial security, we can easily compute the desired quantile of the historical distribution to estimate the VaR, and, after that, estimate the ES just by averaging the values below this threshold.

However, this naive approach is not well suited for our purpose: in fact, by considering our portfolio as a single financial asset, we are losing all the information that comes from all the components; moreover, with this approach we are simply focusing on the past behaviour of the fund, while our main goal is to retrieve a risk metric for the future possible trends.

In order to overcome these issues, we propose two alternative techniques that provides better risk estimates:

- Parametric approach (simple approach and time-series modelling approach),
- Bootstrapping

The first method is very well suited for understanding the main vulnerabilities in the portfolio composition, while with the second one it is possible to observe how the metrics varied in the past quarters.

For both pieces of analysis, we used daily market prices of portfolio constituents for the past 151 trading days (covering mid-August 2025 to mid-March 2026). All the analysis has been conducted with Python.

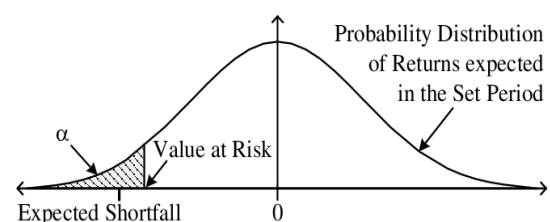
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Parametric Approach

We propose to analyse VaR and ES separately for each asset included in the portfolio and then, to estimate the VaR and ES for the whole fund by taking into account the correlation between portfolio constituents.

Parametric approach is based on the assumption that returns of a financial security follow some theoretical distribution. Thus, VaR and ES can be expressed as an α -percentile of the distribution. The crucial step to accurately estimate VaR and ES is to select the appropriate distribution of returns and estimate its parameters.

It is possible to state that stock returns do not follow Gaussian distribution due to the presence of "fat tails": unexpected events might have a huge impact on the stock prices, so it is possible to observe extreme values more frequently than a Normal distribution would predict. For this reason, we assume that stock returns follow a Student-t distribution, thus, the parameters to be estimated are the mean μ , volatility σ and number of degrees of freedom ν .

To obtain more valid and robust results, we proceed with two alternative parameter estimation approaches – (a) simple approach, and (b) time-series modelling approach. For all parts of analysis, we use the last 151 return observations, which correspond to 7-months window.

Parametric Approach

Time-series modelling approach

Under the simple approach, we estimate the above-mentioned parameters in the following way:

1. We assume that the mean historical daily return of each security are a good estimate for the expected future return. Thus, μ is estimated as a simple average of daily returns.
2. Volatility of returns σ is calculated as a simple standard deviation of returns.
3. Number of degrees of freedom ν is selected in a way that it best approximates the empirical distribution of returns. In order to do that, we used the Kolmogorov-Smirnov statistic that, for a given empirical cumulative distribution function F and a proposal F_n , is:

$$D_n = \sup_x |(F_n - F)|$$

Ideally it should be equal to 0 for a perfect fit, so our goal is to minimize it by proposing different ν for Student-t distribution.

Time-series modelling approach

Because the volatility of returns is not constant over time, it is often modelled by conditional heteroscedasticity processes. The most common way to model volatility is through a Generalized Autoregressive Conditional Heteroscedasticity model GARCH(p,q), where the forecast of the next-period volatility depends on the previous p shocks to stock returns (derived from some mean model) and previous q forecasts of volatility:

$$\sigma_{t+1|t}^2 = \omega + \sum_{i=1}^p \alpha_i \epsilon_{t-i}^2 + \sum_{j=1}^q \beta_j \sigma_{t-j+1|t-j}^2$$

The advantage of GARCH model is that it allows to better estimate the current forecast of return volatility by putting more weight on more recent information. Thus, in the periods of market turbulence GARCH model will produce higher volatility forecasts than the simple average of squared deviations from the mean (see the graph at the bottom).

Because the portfolio is composed exclusively of equity instruments traded on liquid markets, we can assume that prices are efficient, and thus returns can be described by a constant mean model for GARCH(p,q) process, which implies that current mean estimates do not depend on previous returns or shocks. GARCH(p,q) then is estimated by Maximum Likelihood (MLE), which optimizes the distribution parameters. We subsequently use MLE estimates of distribution to derive VaR and ES.

Value-at-Risk

Once the parameters of stock returns are known, it is possible to calculate VaR. We estimate the VaR for 95% and 99% confidence level by applying the following formula:

$$VaR_\alpha = \sigma * T_\nu^{-1}(\alpha) + \mu$$

where σ is the estimated volatility of a security, $T_\nu^{-1}(\alpha)$ is the α -percentile of a Student-t distribution with ν degrees of freedom, and μ is the expected return of a stock

Expected Shortfall

Expected shortfall is defined as a conditional expectation of loss, given that the loss occurred. If we introduce the assumption of a continuous distribution of returns of a security, then parametric expected shortfall is simply defined as a tail conditional expectation, and thus can in general be defined by the following formula for any security X :

$$ES_\alpha(X) = -\frac{1}{\alpha} \int_0^\alpha VaR_\gamma(X) d\gamma$$

Under the assumption of Student-t distribution with ν degrees of freedom it can be proven that the expected shortfall would be given as:

$$ES_\alpha(X) = \sigma * \frac{\nu + (T_\nu^{-1}(\alpha))^2}{\nu - 1} \frac{\tau_\nu(T_\nu^{-1}(\alpha))}{\alpha} + \mu$$

where σ is the estimated volatility of a security, $T_\nu^{-1}(\alpha)$ is the α -percentile of a Student-t distribution with ν degrees of freedom, $\tau_\nu(\cdot)$ is the probability density function of Student-t distribution with ν degrees of freedom and μ is the expected return of a stock.

We estimate the ES for 95% and 99% confidence level.

Portfolio VaR and ES

Considering the correlation between the stocks, we estimate the VaR and ES of the whole portfolio for 95% and 99% confidence level by applying the following formulas:

$$VaR_{\alpha,ptf} \approx \sqrt{VaR_\alpha * \rho * VaR_\alpha'}$$

$$ES_{\alpha,ptf} \approx \sqrt{ES_\alpha * \rho * ES_\alpha'}$$

where VaR_α and ES_α are column vectors of individual stock VaR and ES, respectively and ρ is the correlation matrix between securities

The approximation arises because of the assumption of Student-t distribution of returns – the formulas above become an equality the closer the distribution of returns is to the Gaussian.

	Simple approach	GARCH
VaR_{95%}	-0.95%	-1.07%
VaR_{99%}	-1.38%	-1.57%
ES_{95%}	-1.22%	-1.38%
ES_{99%}	-1.61%	-1.85%

TOP & BOTTOM 5 stocks (simple approach)

	VaR 95	VaR 99	ES 95	ES 99		VaR 95	VaR 99	ES 95	ES 99
ROMANIA 2.875% MZ29	-0.22%	-0.32%	-0.28%	-0.38%	URANIUM		-7.70%	-6.78%	-8.92%
BUND 0% FB32	-0.28%	-0.40%	-0.35%	-0.46%	FUTU HOLDINGS LIMITED	-5.44%	-7.90%	-6.96%	-9.25%
SPAIN 3.45% OC34	-0.42%	-0.60%	-0.53%	-0.69%	NOVO NORDISK A/S	-5.77%	-8.17%	-7.25%	-9.39%
UK GILT 4.25% JUN2032	-0.42%	-0.60%	-0.53%	-0.70%	VITEC SOFTWARE GROUP AB	-5.00%	-7.76%	-6.75%	-9.68%
US TREASURY 4.25% AUG2035	-0.51%	-0.75%	-0.66%	-0.89%	CAMECO CORPORATION	-5.90%	-8.53%	-7.52%	-9.88%

Bootstrapping

When estimating a certain metric, one of the main problems in Statistics is the lack of the whole population data and the consequent use of only a sample. In our case the population data is the complete historical price data of the securities that are part of our portfolio, in which we only have the data of recent years.

Bootstrapping is a statistical technique that by having only a sample of the population data, provides estimates of statistical metrics that are closer to the ones obtained from the population data.

Given a sample of size n , implementing bootstrap is very simple:

- Sample with replacement n times from the original sample (note that one observation could be selected more than once);
- Compute the metric of interest (in our case the VaR or ES) on this newly created sample and save it;
- Repeat the previous steps M times with $M \rightarrow +\infty$ (we have selected $M=300$ for instance);
- Average and compute the standard error of the metrics estimated in each step.

With this method, by estimating the expected shortfall and the standard errors, we can retrieve a more insightful view of our portfolio, but in this case, we are losing the risk contribution of each stock that we had in the previous case.

	Estimate	Standard error
VaR _{95%}	-0.97%	0.14%
VaR _{99%}	-1.56%	0.30%
ES _{95%}	-1.31%	0.18%
ES _{99%}	-1.75%	0.27%

TOP & BOTTOM 5 stocks (GARCH)

	VaR 95 (GARCH)	VaR 99 (GARCH)	ES 95 (GARCH)	ES 99 (GARCH)
US TREASURY 4.25% AUG2035	-0.48%	-0.68%	-0.60%	-0.78%
SPAIN 3.45% OC34	-0.54%	-0.77%	-0.68%	-0.89%
BTP 2.95% ST38	-0.23%	-0.54%	-0.47%	-1.06%
OAT 1.25% MG36	-0.62%	-0.92%	-0.80%	-1.09%
UK GILT 4.25% JUN2032	-0.80%	-1.14%	-1.01%	-1.31%

	VaR 95 (GARCH)	VaR 99 (GARCH)	ES 95 (GARCH)	ES 99 (GARCH)
CATERPILLAR INC.	-7.05%	-13.94%	-11.85%	-21.74%
VITEC SOFTWARE GROUP AB	-7.30%	-14.31%	-12.27%	-22.78%
MERCADOLIBRE INC.	-7.69%	-15.19%	-12.97%	-24.08%
NOVO NORDISK A/S	-9.07%	-17.48%	-14.93%	-27.05%
PT ADARO ANDALAN INDONESIA TBK	-8.88%	-19.30%	-16.66%	-34.27%



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