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# University of Southampton Finance Journal

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## 1. WEEKLY ROUNDUP — OCTOBER 27, 2025

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*Zaki Bawany - Macro and Strategy Editor, Head of Trading*

### Market Overview

- Global equities ended the week higher as earnings optimism and easing U.S.–China trade tensions lifted sentiment.
- The S&P 500 gained 1.9% and the Nasdaq 2.3%, supported by strong tech results and expectations of a Fed rate cut.
- Treasury yields edged lower, with the 10-year closing near 4.0% as investors priced in softer growth and inflation data.
- Gold remained firm near record highs, while oil rose on renewed supply concerns following fresh sanctions on Russian producers.
- The dollar held steady; sterling rebounded after mid-month weakness, and European indices outperformed amid defensive rotation.
- Equity fund inflows hit an 11-month high, totalling \$49 billion globally as risk appetite recovered.
- Analysts caution that stretched U.S. tech valuations and lingering policy uncertainty could heighten near-term volatility.

### Political & Policy Developments

- Markets focused on the upcoming FOMC meeting, with traders pricing a 25 bps cut on October 29 and a possible follow-up cut in December.
- The U.S. government shutdown entered another week, delaying economic data and SEC filings, adding to policy uncertainty.
- U.S.–China officials signalled progress toward a limited tariff pause and potential Xi–Trump meeting, helping to stabilise sentiment.
- Washington announced new energy sanctions on Rosneft and Lukoil, tightening global crude supply.
- European policymakers struck a cautious tone ahead of IMF and World Bank meetings, where coordinated stimulus discussions are expected.

## IPOs & Capital Markets

- The 2025 IPO pipeline remains active, with U.S. and Asia listings continuing despite the shutdown.
- Several tech and crypto-adjacent IPOs were delayed due to market volatility, but investor demand for AI and defence themes remains strong.
- Europe's Ottobock IPO priced at the top of its range, showing selective risk appetite in capital markets.
- Venture-capital flows remain concentrated in clean energy and automation start-ups, though valuations are under tighter scrutiny.

## UK & European Markets

- European equities closed the week higher, supported by stable inflation data and continued defensive rotation.
- The FTSE 100 hit record territory, lifted by pharmaceuticals and financials, while the softer dollar provided a mild tailwind.
- Sterling strengthened modestly as investors pared back BoE cut expectations following resilient wage data.
- Continental indices benefited from easing geopolitical tensions and stronger-than-expected Q3 earnings reports.
- Farage's "crypto champion" stance gained further media attention, though U.K. digital-asset legislation remains pending.

## Commodities & Supply Chains

- Gold hovered near \$2,400 / oz as investors sought protection ahead of the Fed decision.
- Oil prices rebounded, with Brent approaching \$90 a barrel after U.S. sanctions tightened Russian supply routes.
- China's ongoing rare-earth export controls kept pressure on EV and semiconductor supply chains, prompting renewed Western diversification efforts.
- U.S. agriculture exports continued to slow amid weaker Chinese demand, but ASEAN trade flows showed resilience.
- Defence and energy manufacturers remain beneficiaries of government incentives to onshore critical materials.

## Crypto Markets

- Bitcoin traded between \$57,000 and \$61,000 as ETF flows stabilised after early-month volatility.
- Ethereum consolidated near \$2,750 amid muted on-chain activity.
- Crypto-linked equities (Coinbase, Marathon Digital) recovered 5–8% following last week's sell-off.
- Institutional volumes remained strong, underscoring a more mature investor base despite policy uncertainty.
- Speculation persisted around potential insider trades linked to tariff headlines, though regulators have yet to comment.

## Volatility & Macro Sentiment

- The VIX Index remained stable in the mid-teens, as risk appetite held but traders hedged ahead of key policy events.
- Leverage and margin exposure declined slightly as funds trimmed positions going into the FOMC decision.
- Liquidity conditions remain thin, with the U.S. shutdown limiting official data flow and complicating macro forecasting.
- Markets now turn to IMF and World Bank meetings for coordinated guidance on fiscal support and global-growth prospects.

## Key Takeaways

- Optimism returned to markets on the back of strong earnings and expectations of monetary easing.
- Investor positioning remains cautiously risk-on, rotating into industrials, energy, and defensive sectors.
- Valuations in U.S. tech remain stretched, keeping the sector sensitive to any policy or rate surprises.
- European markets may continue to outperform if U.S. political risk persists.
- Crypto assets show resilience, reflecting growing institutional participation.
- Overall tone: **guarded optimism** - underpinned by solid earnings and liquidity expectations but constrained by policy uncertainty.

# Fundamental Anchoring in Microstructure Noise

October 28 2025

**Thomas Amara - Editor-in-Chief, Head of Investing**

## 2. FUNDAMENTAL ANCHORING IN MICROSTRUCTURE NOISE

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### Abstract

This paper proposes an effective algorithmic trading strategy that systematically buys stocks which are (a) temporarily mispriced at the close relative to their intraday traded price, (b) trading within compressed intraday ranges, (c) exhibit persistent operating profitability, and (d) have recently underperformed their peers.

Economically, the strategy targets fundamentally sound firms that have been temporarily sold off in low-liquidity, range-bound market conditions where transient order imbalances create short-term mispricings. Backtests demonstrate robust performance, with a Sharpe ratio of 2.03, a fitness score of 1.40, and an average annual return of 16.24% over the sample period. The alpha performs particularly well in volatile or dislocated market environments, supporting the behavioural and microstructural rationale for liquidity-driven mean reversion.

## INTRODUCTION

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In modern electronic markets, prices frequently deviate from fundamental value due to transitory liquidity shocks, execution imbalances, and behavioural frictions. Institutional rebalancing flows, ETF arbitrage, and algorithmic order-splitting can all induce short-lived dislocations between traded prices and underlying valuation anchors. While these anomalies often fade within hours or days, they present profitable opportunities for quantitatively disciplined actors capable of distinguishing between structural value signals and transient noise.

This paper proposes an alpha designed to capture precisely these conditions. By combining intraday microstructure information with slow-moving fundamental variables, the model integrates three key mechanisms: (i) microstructure mean reversion—reversals following closing-price dislocations relative to volume-weighted average price (VWAP); (ii) volatility compression—price stabilisation in narrow-range trading sessions; and (iii) fundamental anchoring—reversion towards firms with consistent operating profitability. The addition of a contrarian component ( $rank(-Returns)$ ) ensures exposure to recent losers, which empirical literature (Jegadeesh and Titman, 1993; Lehmann, 1990) identifies as the most prone to short-term reversals.

The economic intuition underpinning this alpha aligns with both behavioural and microstructure theories. According to the attention and overreaction frameworks, investors often overrespond to non-fundamental signals under constrained liquidity, producing predictable price overshooting. Meanwhile, market microstructure studies document that closing auctions frequently reflect temporary execution pressure rather than informed trading. By conditioning on profitability persistence, this strategy isolates those dislocations most likely to mean-revert rather than reflect genuine information updates.

Empirical backtesting confirms these theoretical premises. The alpha exhibits robust, high Sharpe performance across normal and volatile periods, with particularly strong results in 2020–2022, years characterised by heightened order imbalance, macro uncertainty, and liquidity fragmentation. However, it underperforms in momentum-driven markets such as 2023, consistent with its contrarian structure. This performance asymmetry reinforces its role as a complementary signal within multi-factor framework, rather than a standalone alpha.

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## FORMULA AND COMPONENTS

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The following alpha signal combines price microstructure, volatility structure, and fundamental strength to capture short-term mean reversion in fundamentally sound stocks:

$$\text{Alpha} = zscore\left(\frac{VWAP}{Close}\right) \times (1 - rank\left(\frac{high}{low}\right)) \times ts\_rank\left(\frac{Operating\ Income}{Market\ Cap}, 252\right) \times rank(-Returns)$$

### 1. Liquidity-Induced Mispricing

The first component,  $zscore\left(\frac{VWAP}{Close}\right)$ , captures short-term deviations between the intraday volume-weighted average price and the final closing price. In efficient markets, closing prices should converge to VWAP levels as order flow and liquidity stabilise near market close. However, empirical studies by Hendershott and Riordan (2013) and Madhavan (2000) demonstrate that late-session trading pressure and order imbalance often distort closing prices, leading to short-lived inefficiencies. A high  $VWAP/Close$  ratio indicates end-of-day

downward mispricing, suggesting subsequent upward correction as liquidity normalises.

## 2. Volatility Compression and Mean Reversion

The term  $(1 - \text{rank}(\text{High}/\text{Low}))$  exploits periods of intraday range compression, a well-documented precursor to breakout or reversal events, as discussed by Bollerslev, Litvinova, and Tauchen (2019). Narrow trading ranges often reflect transient uncertainty, where market participants pause ahead of information releases or after extended directional moves. Such “volatility droughts” are followed by abrupt price re-equilibration as new information or risk appetite returns to the market. By conditioning on low intraday dispersion, the strategy systematically targets setups with asymmetric payoff profiles following volatility normalisation.

## 3. Fundamental Anchoring

The inclusion of  $ts\_rank\left(\frac{\text{Operating Income}}{\text{Market Cap}}, 252\right)$  grounds the signal in long-term profitability persistence. This design builds upon the profitability factor identified by Novy-Marx (2013), who demonstrates that operating profitability explains cross-sectional returns beyond traditional value measures. Profitable firms tend to exhibit higher return resilience during transient sell-offs, as market participants overreact to short-term price noise. By interacting this term with short-term reversal components, the strategy effectively filters out structurally weak firms and isolates genuinely mispriced high-quality equities.

## 4. Behavioural and Risk-Based Interpretation

The interaction with  $\text{rank}(-\text{Returns})$  introduces a behavioural dimension. Short-term underperformance triggers investor overreaction and disposition effects, as described by Daniel, Hirshleifer, and Subrahmanyam (1998), resulting in price overshooting relative to fundamentals. Contrarian positioning against this temporary pessimism captures the mean-reversion premium that arises as market expectations recalibrate. From a risk-based perspective, this behaviourally grounded mispricing corresponds to the provision of liquidity during transient dislocations, which has historically been compensated with positive expected returns.

## 5. Components Synthesis

The combined effect of these components forms a multi-horizon hybrid strategy. High-frequency components ( $VWAP/Close$ ,  $High/Low$ ) identify transient market inefficiencies rooted in liquidity and microstructure frictions, while the low-frequency profitability anchor ensures reversion toward economically justified value rather than noise. The contrarian

term  $\text{rank}(-\text{Returns})$  serves as a behavioural catalyst, enforcing exposure to short-term overreaction cycles. Together, these mechanisms create a robust signal that exploits the intersection between transient order-flow distortions and persistent fundamental strength — a configuration that remains underexplored in the existing literature on cross-sectional return predictability.

Together, these factors create a hybrid strategy that favours undervalued, profitable, and temporarily oversold stocks whose prices are likely to revert toward equilibrium.

## ECONOMIC RATIONALE

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This alpha draws upon three theoretical frameworks:

1. **Microstructure mean reversion:** Short-term deviations between VWAP and closing prices often signal temporary order imbalance (Hendershott & Riordan, 2013).
2. **Fundamental anchoring:** Persistent operating profitability acts as a valuation anchor, stabilising returns and reducing exposure to speculative mispricing (Novy-Marx, 2013).
3. **Volatility compression:** Low intraday ranges often precede price reversals, as investor sentiment consolidates before a correction.

## TESTING PARAMETERS

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The strategy was tested within the WorldQuant BRAIN simulation environment using the following configuration parameters, designed to balance responsiveness, robustness, and economic realism.

Table 1: Backtest Configuration Parameters

Parameter	Specification
Instrument Type	Equity
Region	USA
Universe	Top 3000 by market capitalization
Decay	15
Delay	1
Truncation	0.01
Neutralization	Market-level
Pasteurization	On

These settings ensure that the alpha signal operates over a medium-term horizon with moderate decay, reducing the influence of transient microstructure noise while maintaining re-

activity to evolving price dynamics. A delay of one trading day mitigates look-ahead bias, while a truncation threshold of 0.01 suppresses outliers arising from illiquid or low-volume securities. Market-level neutralization isolates idiosyncratic effects by removing systematic market exposure, allowing the signal to reflect genuine cross-sectional predictive power.

The Pasteurization feature, enabled by default, standardizes input features and ensures robustness to data irregularities across the universe. NaN verification guarantees statistical integrity by excluding incomplete observations, while the deactivation of unit handling retains the raw structure of financial ratios used in the formulation. Collectively, this configuration provides a realistic environment for evaluating the signal's efficacy across diverse market conditions.

## PERFORMANCE SUMMARY

Year	Sharpe	Turnover	Fitness	Returns	Drawdown	Margin (‰)
2018	0.90	34.40%	0.32	4.42%	3.92%	2.57
2019	3.13	32.70%	2.07	14.31%	2.90%	8.75
2020	1.91	33.20%	1.23	13.66%	3.33%	8.23
2021	2.99	35.65%	2.45	23.86%	3.96%	13.39
2022	13.05	37.30%	22.22	108.09%	0.87%	57.96
2023	-3.21	30.80%	-3.08	-28.28%	2.52%	-18.36
<b>Aggregate</b>	<b>2.03</b>	<b>34.13%</b>	<b>1.40</b>	<b>16.24%</b>	<b>11.13%</b>	<b>9.52</b>

Table 2: Backtest performance summary of the VWAP-Fundamental Mean Reversion Alpha.



Figure 2.1: Alpha PnL over 2018-2023 testing period

## INTERPRETATION

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The alpha demonstrates robust performance across most years, particularly during periods of market stress and volatility (2020–2022), consistent with its mean-reversion profile. Its extraordinary performance in 2022 (+108% returns, Sharpe 13.05) reflects its ability to exploit overreactions and liquidity dislocations amid macroeconomic uncertainty.

However, the negative Sharpe in 2023 indicates sensitivity to momentum-driven markets, where price trends persist longer and mean-reversion strategies underperform. This aligns with the behavioural hypothesis that during euphoric, liquidity-fueled phases, investors underweight fundamental anchors, and overreaction-based signals lose efficacy.

## CONCLUSION

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This alpha successfully integrates market microstructure and accounting fundamentals to identify short-term mispricings. It performs exceptionally well in volatile, dislocated markets and provides a strong case for combining high-frequency market data with slow-moving fundamental variables. Future extensions could include volatility regime filtering, sentiment adjustments, or adaptive weighting based on macroeconomic indicators.

This article provides further evidence that short-term mispricings at the intersection of market microstructure and firm fundamentals can be systematically exploited. The proposed alpha integrates price dislocation (VWAP/Close), volatility compression, and profitability persistence to capture transient inefficiencies grounded in behavioural and liquidity dynamics.

The alpha exhibits a strong and stable Sharpe ratio of 2.03 with moderate turnover and limited drawdowns, outperforming typical mean-reversion frameworks in volatile or fragmented market conditions. Its design demonstrates that combining slow-moving fundamental anchors with high-frequency dislocation measures mitigates the overfitting and regime instability that often plague pure technical signals.

Beyond its statistical success, the strategy carries deeper economic meaning: it embodies the liquidity provider's edge, monetising behavioural biases and order-flow imbalances while maintaining exposure to fundamentally sound firms. This reinforces the view that markets, while largely efficient, remain prone to transient inefficiencies that can be harvested through disciplined, data-driven mechanisms.

# Industry Analysis: The Bio-Energy Industry

October 28 2025

**Max Deere Martinez - Founding editor, President**

## 3. INDUSTRY ANALYSIS: THE BIO-ENERGY INDUSTRY

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### Background and technological pathways

The bioenergy industry is concerned with generating energy using biological material. This can roughly be divided into 3 main uses:

- **Electricity:** using biomass to generate electricity for everyday use, making energy cleaner and more sustainable.
- **Heat:** This is where biomass is converted into thermal energy, and this is mainly used for industrial purposes as well as for residential heating.
- **Biofuels and biogas:** Biofuels are increasingly being seen as a viable alternative to the fuels that are used in transportation, which is a major source of global emissions, almost as much as a quarter of all  $CO_2$  emissions.

The increasing public scrutiny surrounding fossil fuels and unsustainable forms of energy generation has created new demand for green energy sources, and the bioenergy industry is seen as a key player, particularly regarding transport, due to the problems that EVs have with the constant need to charge the battery and the time that takes compared to loading a car with fuel. Biofuels will be key, especially with aviation, where electricity-powered vehicles are not as easy to develop and use, particularly for the long-range requirements within the industry.

There are some key problems now, though, regarding the bioenergy industry and how sustainable it really is. Much of the biological material used, especially for electricity generation, is wood pellets from some of the world's oldest and largest forests, and some companies have caused controversy by sourcing these materials in unsustainable ways and contributing to the large deforestation problems we currently have. The plants are also expensive to run and require lots of this biological material, which can increase operating costs.

In terms of technology pathways, they can be split into the different segments within the bioenergy industry.

Biofuels and biogases are seeing new technology being developed and created in the field of aviation fuel and other fuels for transport that is more energy intensive. Biofuels are also being used to create new fuels once they are mixed with fossil-based fuels. This will be a key driver in cutting down global emissions in the short term. There are also a lot of technological advancements in the field of turning waste into energy. Biogas is also being infused with natural gas to cut down on the use of fossil fuels.

Biomass for electricity is seeing advancements in the area of direct combustion, which Drax is a global leader in. This technology is based on directly burning biomass to create energy, with feedstock like wooden pellets and agricultural residues also being used. This is also co-fired with coal plants to cut down on the amount of coal being used to generate electricity. There is also new technology which can gasify the product, which can make energy creation more efficient during combustion.

Biomass for heat is seeing advancements in the area of boilers and modern heating systems. Modern biomass boilers that can allow residential use of biomass have started to be used and developed. The same combustion techniques can also be used for heating purposes too.

The BECCS technology is rapidly being recognised as a key player in achieving net zero by 2050. Much of the technology is relatively new, and carbon capture technology is being implemented more and more into the manufacturing process to cut emissions. Globally this industry is receiving a large amount of all investment into renewables, and the U.K. recognises this and wants to become a leader in the research and use of this new carbon capture technology. The UK carbon capture sector is expected to grow at 14% year on year until 2032, and bioenergy with CCS is expected to grow at 19% until 2034.

This industry is dominated by a few large firms like Drax, BP and Equinor. These solutions have high capital costs because of the required infrastructure, meaning they are not perceived as being a major solution to the climate crisis by the public. There are also still debates as to whether they are reliable and viable enough, especially as the technology is still very new. Much of the UK's manufacturing is still very energy intensive and difficult to electrify, so BECCS may become a key factor in sorting out this problem as it starts to get rolled out into the manufacturing. There have been a lot of challenges for projects in terms of regulations with a lack of clarity in the framework. This has stopped the Teesside power project from being able to move on with development, especially as there are legal challenges to the project from activists and environmental groups.

## GLOBAL:

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### Size, scale and trends:

The bioenergy industry was measured to have a total value of \$296.09Bn in 2024 and is expected to reach \$320.81Bn in 2025, signifying an annual compound growth rate of 8.3%, showing the immense potential the industry has and its rapidly expanding nature. This trend can be attributed to market expansion in developing regions and increasing industrial usage of bioenergy, as well as the new technological advancements that are changing the industry, such as the increasing use of urban waste for energy generation, which is a groundbreaking way to solve the problem of sourcing material as well as decreasing urban pollution. The rapid introduction of net zero and decarbonisation targets is expected to propel the industry forward as a major key player, and that is why the industry is projected to have a compound annual growth rate of 9.7% until 2029.

Segment	Market Size 2024 (USD)	CAGR	Applications	Notes/Trends
Biofuels	140-150 B	7.7%	Transportation fuels	Shift to 2nd/3rd gen biofuels, aviation SAF
Biomass for electricity generation	100-110B	6.3%	Power generation	Large plants, co-firing, heating and power
Heat from biomass	35-40	5-6%	Industrial/ residential heating	Heating and power, modern boilers
Biogas	10-15	8-9%	Electricity, heat, and vehicle fuel	Fastest growth, biomethane up-grading

The biofuels segment is the main driver of this industry growth and is outpacing the growth of the biomass for electricity segment. Biofuels are much more profitable, especially as oil and gas prices have remained high, causing demand for other greener and cheaper fuels. Biofuels are now starting to be developed for aviation and other 2nd/3rd-gen biofuels that can be used for more energy-intensive modes of transport. They are projected to have a compound annual growth rate of 7.7% as opposed to the 6.3% for the biomass for electricity segment.

Biomass is now shifting its source of biological material to larger plants to increase overall power generation. This is also being used for co-firing, which in this context is when fossil fuel plants also partially generate electricity through using some biomaterial in the process to reduce the amount of fossil fuels they are using. This is increasingly popular with big oil

giants who are trying to diversify and improve their public perception.

Heat from biomass, particularly because of the environmental scrutiny due to the sourcing of material, is lower, between 5–6%. The main industry trend in this segment is the introduction of more modern boilers that can accommodate the use of biomass, and new technology has allowed them to become more efficient and less resource intensive. Biogas is seeing the most rapid growth with a CAGR between 8–9%, especially due to the Russian invasion of Ukraine massively restricting the gas supply for western countries, forcing them to find an alternative to natural gas. The biomethane production segment has been rapidly upgrading their product and improving it for more efficiency and allowing it to be used in more intensive practices.

### **Competitive landscape and predictions on future supply and demand dynamics:**

The bioenergy industry is dominated by large global corporations and traditional oil giants. Much of the investment into bioenergy globally comes from governments but also massive oil corporations like Chevron and BP, who have their own bioenergy subsidiaries. Potentially, more than half of all investment into bioenergy comes from oil giants. BP, Chevron, Shell, TotalEnergies, ExxonMobil, and Eni have announced 43 biofuel projects combined slated to be operational by 2030. Particularly when it comes to biofuels, they are dominant. Growth is driven by mandates and SAF/renewable diesel demand, which remains high. The CAGR is between 7-8% year on year, which suggests rapid expansion is taking place and growth is very strong.

The biomass for the electricity industry is dominated by a few large, specialised firms such as Drax and Ørsted. They focus more on direct combustion techniques, burning feedstock like wood pellets to generate electricity. This segment has a smaller compound annual growth rate between 6% and 7% compared to biofuels, and their main factor in regard to supply and demand dynamics is the sourcing of feedstock. It is looking like waste-to-energy is the future rather than burning loads of imported wood pellets from the North American timber industry, which is expensive and damaging to local forests.

Companies like Drax are also key pioneers in BECCS technology and carbon capture. This is crucial in reducing the emissions from the combustion of biofuels, which do produce  $CO_2$ , with the idea being that this is offset by the  $CO_2$  captured by new plants that are planted to be used as feedstock. This technology is very capital intensive at the moment, but it still is expected to drastically affect the supply and demand landscape of the timber industry and other feedstock sources, as it makes combustion of biomass viable for the environment.

EUROPE:

### **Size, scale and trends:**

In the year 2022-2023, roughly 55-60% of all renewable energy consumption came from bioenergy. The European bioenergy market is estimated to have a value around \$50-60B. Its largest bioenergy market is Germany, with a market share of around 15-20%, roughly 3 times larger than the U.K. bioenergy market. This market intends on growing further too, and the EU intends to grow the number of biofuels used in transport from just 10% of total renewables used in transport to 29% by 2030. The current European market is not growing as fast as other markets around the world, with growth this year only expected to be 0.72% due to some companies ceasing operations and larger companies closing plants due to lower profitability as subsidies decrease due to austerity measures and right-wing shifts in policy that do not heavily favour the bioenergy industry due to less importance on climate change.

The EU itself is very focused on the green transition, and the Green Deal aims to make Europe the first climate-neutral continent by 2050, with bioenergy expected to be a big part of achieving this target. The biogas and biofuels segments have seen growth that outpaces the industry. Especially because of the supply shocks from the Russia-Ukraine conflict, Europe has become ever keener and more incentivised to move away from fossil fuels and towards green energy sources for improved domestic energy independence and to reach client goals.

The European bioenergy industry does have a few problems, though. Sluggish growth compared to international competition and the closure of companies and subsidies slowly decreasing have hurt an industry that struggles to make profit on its own. The feedstock required also is not as available in Europe, with most of it coming from the USA, Brazil and Canada. The public perception of bioenergy is also not very high due to controversies when it comes to sustainably sourcing feedstock.

However, there are positive trends in the European bioenergy industry. One of these is the increase in usage of waste being used as feedstock to create energy, which reduces landfill pollution as well as CO<sub>2</sub> emissions. Growth is also high for biofuels and biogas, with an estimated CAGR until 2030 of 6.7% and 4.0%, respectively.

### **Competitive landscape and predictions on future supply and demand dynamics:**

The European bioenergy market is experiencing significant growth, driven by the region's commitment to renewable energy and sustainability. It is projected to expand at a compound annual growth rate of 2.30%. This growth is fuelled by increasing demand for sustainable heating, electricity, and transportation fuels, as well as supportive government policies and incentives promoting bioenergy adoption.

Oil majors like Shell and Total have over 40 projects planned by 2030. However, challenges such as feedstock availability, production costs, and policy uncertainties remain, which could impact the pace of development and market dynamics. Supply is expected to be sufficient to meet the projected demand for bioenergy, provided that appropriate policies and infrastructure are in place. However, competition for biomass feedstocks from various sectors, including biofuels, heating, and electricity generation, may lead to supply constraints and price volatility.

## UNITED KINGDOM

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### **Size, scale and trends:**

The U.K. bioenergy industry has an estimated value of around £3.7Bn, with Drax being by far the largest and most important player in the U.K. bioenergy industry. The CAGR for the U.K. biomass industry is 8.5% until 2030, showing the immense growth potential for the industry. For the first time in the year leading up to June 2025, the UK had the majority of its electricity produced by renewables. Bioenergy makes up around 7-8% of U.K. electricity generation, so it plays a significant part in achieving net zero targets as well as decarbonising the U.K. Bioenergy also makes up 5-6% of road transport fuel consumption, mainly as biodiesel or blended in with other petrol products. The bioenergy market is heavily subsidised by the UK government controversially, as there is debate as to whether bioenergy is sustainable and as viable as other sources of energy.

Drax, for example, received around £869 million in subsidies and made around £527 million in profits. This shows how reliant the U.K. bioenergy industry is on subsidies still. The UK government is increasing scrutiny of biomass power plants to ensure compliance with sustainability standards. This includes examining the carbon footprint of wood pellet sourcing and the overall environmental impact of biomass energy production after Drax particularly came under fire for their feedstock sourcing. The UK government has been criticised for not having as ambitious targets as the EU for bioenergy, and the regulation surrounding the industry is unclear and changing often.

There have also been major plant closures in the UK recently, such as Greenergy closing their Immingham plant. The UK faces many of the same problems as the EU in regards to feedstock sourcing, with most of the feedstock coming from North America, especially for Drax, who actually produce their wood pellets in the USA. The UK industry as a whole is trending upwards and outpacing the EU in terms of growth.

### The (%) share of U.K electricity generation in 2019

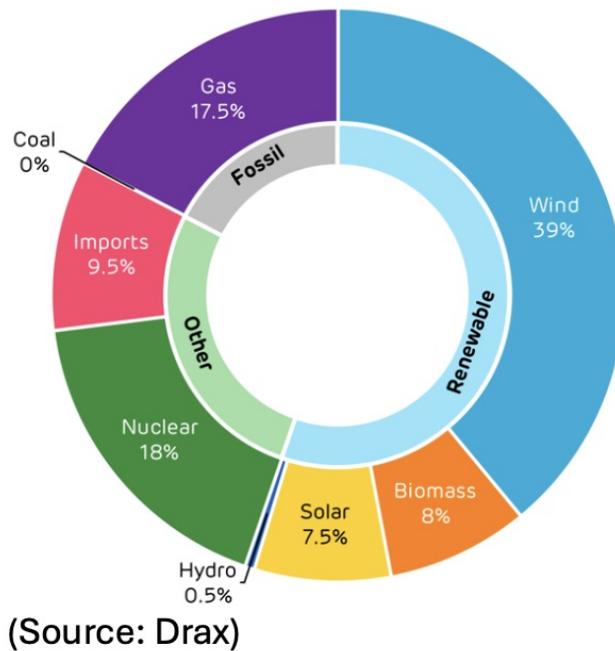


Figure 3.1: The (%) share of U.K electricity generation in 2019 (Source: Drax)

### Competitive landscape and predictions on future supply and demand dynamics:

The UK biomass industry relies largely on imported organic material from the USA and Canada and is dominated by a few large-scale operators. There are also some smaller local companies and groups operating in this area, particularly in more rural forested areas in Scotland. These plants provide around 5-6% of UK energy generation. 60-70% of the feedstock is imported. Biomass is not as cheap as solar or wind with the big up-front costs and the high running costs, as it needs constant feedstock. It also relies largely on CfDs and RHIs. Without these subsidies and incentives, it is not very profitable as a source of energy. Bioenergy is increasingly being replaced by other cheaper renewables which have become much more competitive through technological advances, economies of scale from increasing manufacturing and their low running costs.

This means supply is much more limited for bioenergy, and feedstock production can cause land misuse, habitat destruction and deforestation if not managed properly. It is also a very energy-intensive process to produce energy using biofuels, meaning currently fossil fuels are used in large part, which negates the environmental advantages of the use of bioenergy in the first place. It is also not inherently very profitable in the U.K. to produce bioenergy. The feedstock, high upfront costs and electricity requirements squeeze profit margins. The subsidies, whilst they keep the companies afloat, also cause an overreliance. Vivergo Energy, a major player in the bioenergy industry, closed due to being refused a bailout by the government in 2025 and had not been making a profit since 2011.

# Javier Milei – Argentina’s ‘Pharmakon’?

**Ben MacLean**

## 4. “¡VIVA LA LIBERTAD, CARAJO!”

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Among the world’s many self-proclaimed economic visionaries, none has captured the imagination quite like Argentina’s Javier Milei. The charismatic president was elected in December 2023 amidst a wave of populist fervour, promising to hold the solutions to Argentina’s chronic struggles with inflation and currency instability. Milei spent the early decades of his career as a successful economist, having published over fifty papers on macroeconomics before he entered politics in the late 2010s. His often-repeated slogan, “¡Viva la Libertad, Carajo!” (“Long Live Freedom, Damn it!”) established him as a disruptive outsider whose brand of anarcho-capitalism promised a new path.

Frequently brandishing a chainsaw at rallies, Milei pledged to dismember Argentina’s bloated governmental apparatus, aiming to restore a fiscal surplus and increase investor confidence. His radical austerity reforms set Argentina on what he called a “V-shaped recovery program”—consisting of a brief financial crash followed by long-lasting prosperity—which showed initial signs of promise during his first eighteen months in office.

However, political scandals combined with a slight recession in recent months have seen Milei’s formerly exceptional approval ratings plummet. After a poor performance in the recent Buenos Aires provincial elections and with investor faith waning, Argentina’s mid-term elections on Sunday 26 October now function as a de facto vote of confidence in his leadership.

While Milei’s reforms can be seen as a reaction to Argentina’s many idiosyncratic complexities, Latin America has long served as a testing ground for new economic theories. In the 1970s, General Pinochet’s Chilean government turned to a group of Chilean economists educated under Milton Friedman at the University of Chicago for assistance after inflation had

reached 150%. The “Chicago Boys” implemented sweeping efforts at deregulation, privatisation and free trade—often regarded as the first iteration of neoliberal economics.

Although Argentina’s new reforms emerged domestically, Washington has watched their results with great interest. Milei has close relationships with both Donald Trump and Elon Musk: the former calling Milei his “favourite leader” and providing Argentina with \$40 billion in cash swaps last month, and the latter attempting to emulate Milei’s chainsaw strategy with his Department of Government Efficiency earlier this year.

Just as the Ancient Greeks used the term *pharmakon* to convey both remedy and poison, Milei’s cures may yet be judged worse than the disease. Sunday’s election will mark a critical chapter for the libertarian school of thought Milei represents, and its success or failure will set a far-reaching precedent.

## Milei’s Ambitious Shock Therapy

For decades, the IMF has been a regular presence in Argentinian politics. Buenos Aires has defaulted on its debts nine times in its history, and persistent overspending has led to frequent monetary expansion. Levels of inflation that would have been staggering anywhere else have become normalised—annual rates entering triple digits on a semi-regular basis. Chief among these was a 2,600% spike in 1989, during which Alfonsín’s government announced it had exhausted the nation’s supply of banknote paper.

This recurrent instability has produced a semi-dollarised economy, as Argentinians prefer to store wealth in more reliable currency. These exchanges often occur on an unofficial rate, creating a black market despite criminalisation.

Faced with a weak currency and large fiscal deficits, Argentina has historically oscillated between welfare-state Peronist and neoliberal leaders whose reforms cancel each other out. Milei’s rise can be understood in these terms—critiquing “the ubiquitous proliferation of Keynesian brutes” in the establishment. His attention-grabbing stunts against the elites he labelled *la casta* (“the caste”) included brandishing chainsaws and dressing up as a “libertarian superhero” from tax-free “Liberland” in 2019, which saw him elected in a landslide.

Milei’s platform pitched a “V-shaped recovery program”, being elected with the understanding that he would cause short-term harm for long-term gain. In his first weeks, he dismantled ten of Argentina’s eighteen government ministries, laying off an estimated 35,000 employees in his first year. He devalued the peso by roughly 50%, implementing a crawling peg of 2% per month against the dollar to align official and unofficial rates. Public infrastructure projects were cut back, and most regulations removed to attract foreign investment—including a \$500,000 “Citizenship by Investment” scheme akin to Trump’s proposed “Gold Cards”.

As expected, inflation soared in Milei’s first month, rising from 12% to 26% month-on-month while poverty reached its highest level since COVID. However, inflation soon subsided—averaging 3% monthly in Q3 2024—and poverty stabilised at roughly 1% above pre-

Milei levels during Buenos Aires’ first fiscal surplus in fourteen years.

By late 2024, Milei’s approval rating of 37% ranked among the world’s highest, and his brand of anarcho-capitalism became the right’s success story. He was invited to speak at the World Economic Forum in January 2025 and shared a chainsaw with Musk at CPAC the following month.

## The Chainsaw Loses its Teeth

Despite early gains, indicators suggested Milei’s economic rebound was weaker than hoped. His CBI program—expected to add \$2.5 billion annually by exploiting Latin America’s lack of competing schemes—stalled amid poor demand. Similarly, Argentina’s new Large Investment Incentives Regime (RIGI), offering tax and legal benefits for investments over \$200 million, approved only 11 projects, of which merely three advanced beyond planning.

Milei anticipated a GDP tailwind from a net export surplus. While the finalisation of the EU–Mercosur free-trade deal in December 2024 and mining’s resurgence were steps forward, Argentina’s key export industries—agriculture and manufacturing, together 51% of exports—have yet to recover to pre-Milei levels. Accordingly, the OECD projects a return to a net trade deficit in 2025–26, undermining the export-driven vision.

The peso’s woes have also persisted. Milei scrapped the crawling peg in April 2025, opting for a float against the dollar, effectively unifying exchange rates but exhausting foreign reserves in defence of the peso. Trump intervened with a \$20 billion fixed-rate Treasury swap and sourced an additional \$20 billion from private equity and sovereign wealth funds—stabilising but insufficient.

Investor confidence remains fragile. Just as previous neoliberals were ultimately checked by Peronist successors, the recent failures of Milei’s *La Libertad Avanza* (LLA) Party in Buenos Aires, coupled with corruption scandals, have weakened his grip. He has already conceded to Peronist demands for higher public spending, and if October’s elections leave LLA with fewer than one-third of seats, an opposition coalition could block his executive reforms.

## The Poison or the Remedy?

Milei’s ambitious project now rests on the narrative emerging from Argentina’s midterms. His bid to attract foreign investment relies on a positive feedback loop—growth driving confidence and vice versa. Instead, mild recessions in Q3 2025 and corruption allegations surrounding his \$Libra cryptocurrency—reportedly a \$251 million “rug pull”—have produced a doom loop where investors hesitate, worsening the slowdown. The peso’s decline before the Buenos Aires elections reflected this self-fulfilling pessimism.

To restore trust, Milei must reform his government both domestically and internationally.

Though unlikely to renounce anarcho-capitalist principles, he may need to temper the populist rhetoric that alienates many Argentinians. He must also prevent further corruption and dismiss his sister Karina Milei, accused of taking \$500,000 monthly in bribes linked to drug contracts.

President Trump has stated that future U.S. support depends on Milei’s midterm success. This vote of faith could prove pivotal for the electorate, whose decision may determine whether Milei continues unrestrained until December 2027.

Whether Milei is ultimately judged to have poisoned or cured Argentina’s economy remains uncertain. His reforms have curtailed the hyperinflation long endemic to Argentina and achieved twin surpluses in 2024, earning praise abroad. Yet poverty and inequality remain high, and evidence of wealth trickling down is scarce. The election’s outcome will shape not only Milei’s regime but the nascent economic ideology it embodies—ramifications that will unfold in the months ahead.

# Why are house prices so high in the UK?

October 28 2025

**Arjun Singh Soomal - Editorial Co-Ordinator, Vice-President**

## 5. WHY ARE HOUSE PRICES SO HIGH IN THE UK?

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### **Introduction**

As housing becomes increasingly unaffordable in the UK, any solution requires an answer to the simple question, what is causing the increase in housing prices over the last 30 years?

The average house price in the UK increased from £53,000 to £272,000 from 1996 to 2025 – An over 400% increase. Wages have not kept up with this change, in fact, the average house now costs 9.7x the average salary, over double the 3.5x ratio of the 1970s. A transition to private renting has also been observed, increasing from 8 to 20% between 2003 and 2023, this effect is particularly profound among young adults, when home ownership fell by over 20% between 1996 and 2016. If trends continue, future families will struggle to own their own homes and afford increasing rents. The answer to the question at hand requires a complex discussion of supply and demand, with a combination of factors such as population growth, foreign investment, cheap credit, financialisation, and policy factors.

## POPULATION GROWTH AND MIGRATION

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Population growth continues to increase demand for housing in the UK. Peaking at 1.1% post-Covid, continual population growth requires a corresponding increase in supply to maintain equilibrium in housing market. Net migration continues to be the leading cause of population growth, with many blaming it solely for the current state of the housing market. The UK saw a peak of 906,000 immigrants in the year ending June 2023, up from the usual 200,000-300,000. Although numbers have fallen sharply since, immigration is still high and the effects of the 2022–2023 migration wave remain prevalent.

## SUPPLY

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For a long time now, the UK has been building homes slower than they are being filled. The government estimate that 300,000 new homes are required each year to sustain the growing population, nevertheless, in the last 12 months to June 2025, only 201,000 new homes were built. This is not an isolated incident; the UK has been consistently underproducing homes since 1980.

## THE 1980 HOUSING ACT

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The well-known “Right to Buy” scheme is widely accepted as a major factor in the UK’s current housing crisis. The scheme, “intended” to help renters to buy homes, has flatlined house building, moved properties into the hands of private landlords, and has caused the accumulative house supply “debt” that we are experiencing today.

The scheme allowed renters of council housing to buy the property they live in at a discounted price from market value, 33% for houses, 44% for flats, and 50% for those who had been tenants for 20 years or longer. Initially, the scheme had great success in increasing homeownership, growing from 55% to 67% from 1980 to 1990, however led to several issues further down the line. By 1995, 2.1 million council homes had been sold, netting £28 billion for the treasury. Councils themselves received little of the proceeds from the scheme, leaving them unable to fund the building of new homes. The treasury used the funds to clear debts, rather than reinvesting in new homes, selling homes at such a large discount – many people feel the scheme wasted taxpayer’s money.

Inevitably, the now private property didn’t remain in homeowner hands, private investors viewed ex-council housing as a profitable opportunity. With councils unable to build new homes, speculators profited significantly while rents soared due to lack of supply. Notably, 41% of homes sold under right-to-buy are now being rented on the private market, at much higher rates than when previously state-owned. Charles Gow, son of Thatcher’s Housing Minister well-knownly bought 40 council flats, directly profiting of the legislation that was marketed to benefit the working family.

Homebuilding also saw a similar trend, moving from public to private hands. As state home-building fell, private developers didn’t fulfil supply needs, as they have no incentive to maintain equilibrium between supply and demand. This accumulated and led to the severe and chronic housing shortage we observe today, councils left without sufficient funds to attempt to rectify the situation.

## FINANCIALISATION OF HOMES

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Demand for property as an investment has risen significantly. Due to a combination of historically low interest rates and the commercialisation of homes, investing in the property market has been both more affordable and incentivised than before.

Attitudes towards homeowning have changed as prices have risen – away from a place to live and towards viewing homes as an investment. This can be evidenced by the prevalence of buy-to-let mortgages, beginning in 1996. A cyclical nature can be observed in investor psychology, prices increase, investors want to capitalise, demand increases, and so forth. This attitude towards property as an investment, likely stemming from the aftermath of the 1980 Housing Act, has driven investment demand in the housing market, inflating prices beyond those reflective of the need for a place to live.

## LOW INTEREST RATES

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The 2008 Global Financial recession prompted the Bank of England to slash their base interest rate to 0.5%. This cheap credit, combined with low house prices at the time made it easier than ever to invest in the property market. These low rates maintained, falling to 0.25% in 2016, only exceeding 1% in June 2022.

Low interest rates gave investors greater purchasing power, causing an increase in demand for property. Property prices were inflated by debt-fuelled growth, This connects closely to the next section on wealth inequality, as rising property values disproportionately benefited existing asset holders. aspiring homeowners or investors competed for a limited supply of property by taking larger loans through cheap credit.

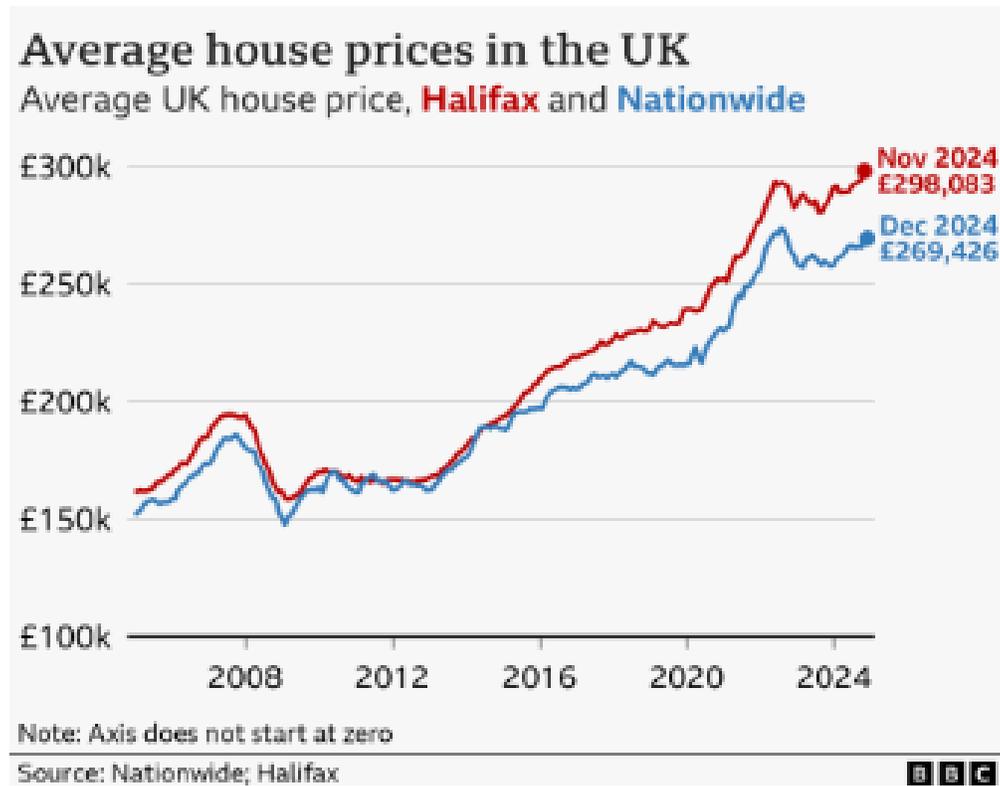


Figure 5.1: Average price houses in the UK (BBC)

The effect on the housing market is clear; a strong inverse correlation can be observed between interest rates and house prices.

## WEALTH INEQUALITY

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Both factors lead into growing wealth inequality. Financialisation of homes, moving away from public ownership and towards investor speculation, have disproportionately benefited wealthy investors, who have been able to acquire previously public assets, and invest more capital into the housing market than members of the public. Low interest rates have created a bidding war between wealthy investors and members of the public, with aspiring homeowners having to take larger amounts of debt to keep up. Cheap credit has afforded all investors the ability to expand the portfolio of properties rapidly, however this effect is more largely pronounced in proportion with existing wealth.

Today, the top 1% hold more wealth than 70% of the population in the UK, a gap which has been continually widening since the 1980s. The lack of wealth tax prevents restriction of growth in wealth inequality.

## FOREIGN INVESTMENT

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Demand is more than just a function of population, investment demand is large in the UK, particularly among investors from China, the Middle East, and Russia. Estimates suggest that without foreign investment, house prices in the UK would be 19% lower than they currently are. This effect is particularly profound in London and South-East England, with investors seeing real estate in this area as a safe and lucrative investment. This demand for homes, particularly in central London, increases prices, affecting nearby “commuter” areas as well.

Many homes are bought by wealthy families, as luxury items or investments, left empty and removed from the active property market. Others are part of larger-scale institutional investment, increasing property prices through speculative demand.

In 2021, the government introduced a stamp duty surcharge of 2% for non-UK buyers, aiming to moderate the impact of foreign investment. In addition to this, non-residents are subject to higher capital gains taxes, measures which are aimed at reducing the effect of foreign investment.

## SOLUTIONS

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The process of re-regulating the housing market in the UK, returning prices to affordable levels is complex and multi-faceted, it requires an in-depth discussion about wider growing wealth inequality in the UK, and government action.

To begin redistributing wealth, many suggest a 0.5% wealth tax would help prevent monopolisation and inequality.

The Government must take initiative and return to the golden age of homebuilding in the UK, councils must be given the resources to build homes that private developers won't.

Migration and population growth are both beneficial for the UK's economy, however they should be matched with housing investment to prevent overcrowding.

The state must enforce deeper regulations around the sale of public property to ensure it serves its purpose as a home rather than serving investor speculation.

## CONCLUSION

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The current elevated prices in the UK are caused by a combination of supply and demand factors. There is a chronic cumulative housing shortage in the UK due to underbuilding following the 1980 Housing Act. Prices have been inflated through investment demand,

as need for housing has transitioned culturally from places to live to investments. Foreign investment and purchasing of properties in central London have increased prices in South-East England particularly, London now having a median house price to wage ratio of 12. Historically low interest rates have fuelled the bullish run of the property market, and growing wealth inequality must be solved. Some argue that the increases in house prices and living costs aren't sustainable, and that the housing market is due to crash, whilst others suggest the housing market shows strong momentum. Ultimately, the disassociation between house prices and wages is not sustainable, and the government is responsible for connecting the two.

## 6. WHAT TO LOOK OUT FOR THIS WEEK

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*Zaki Bawany - Macro and Strategy Editor, Head of Trading*

### Macro and Policy Calendar

- **Tuesday, Oct 28 - Bank of Canada Interest Rate Decision** The Bank of Canada is expected to hold at 4.25%, maintaining a cautious stance following recent signs of disinflation. Policymakers are likely to highlight slowing domestic demand while avoiding early signals of policy easing. Market focus remains on the tone of forward guidance and the probability of a December rate cut, currently priced at around 40%.
- **Wednesday, Oct 29 - Australia Q3 CPI** Expected at 3.3% year-on-year, down from 3.5%. A softer print would reinforce expectations that the Reserve Bank of Australia will remain on hold through 2025.
- **Wednesday, Oct 29 - U.S. Federal Reserve Interest Rate Decision** The Federal Reserve is expected to cut rates by 25 basis points to 3.75–4.00%, marking its first reduction since July. Chair Powell's press conference will be crucial in determining whether this marks the beginning of a longer easing cycle.
- **Thursday, Oct 30 - U.S. Q3 GDP (Annualised)** Consensus forecasts 2.4% annualised growth, down from 3.0% in Q2. The slowdown reflects weaker consumer spending and inventory drawdowns, confirming a gradual cooling in activity.
- **Thursday, Oct 30 - European Central Bank Interest Rate Decision** The ECB is expected to keep rates on hold at 3.75%. Investors will look for clarity on reinvestment plans under the PEPP and any updated inflation projections for 2026.
- **Thursday, Oct 30 - Bank of Japan Policy Decision (JST)** The BoJ is expected to maintain rates near 0.1%, retaining flexibility under its yield-curve control framework. Any mention of ETF tapering or inflation outlook adjustments will be closely watched.
- **Friday, Oct 31 - Euro Area CPI (Flash)** Headline inflation expected at 2.2% year-on-year, with core inflation at 2.4%, continuing the gradual disinflation trend across the euro area.
- **Friday, Oct 31 - U.S. Core PCE Price Index** The Fed's preferred inflation measure is forecast to ease to 2.3% from 2.5%, confirming disinflation momentum and validating the Fed's decision to pivot toward easing.

## Corporate Events and Earnings Highlights

- **NVIDIA GTC 2025 - Begins Monday, Oct 27 (San Jose)** CEO Jensen Huang is expected to unveil the new Blackwell 2 AI architecture and outline strategic partnerships around sovereign AI. The event is anticipated to influence sentiment across the semiconductor and AI ecosystem, including AMD, TSMC, Arm, and ASML.
- **Big Tech Earnings - October 28–30** Microsoft, Alphabet, Apple, Amazon, and Meta will report this week. Focus areas include AI integration, cloud margins, and consumer demand resilience. These results will play a central role in setting the tone for equity markets entering November.
- **Energy Majors - Shell, BP (Thursday)** Investors will focus on refining margins, capital returns, and comments regarding U.S. sanctions on Russian energy.
- **European Banks - HSBC, BNP Paribas, Santander (Thursday)** Expected to report stable capital ratios but declining net interest margins. Guidance on credit losses and 2026 profitability will be key.

## Commodities and Geopolitics

- **Oil** - Prices remain near \$90 per barrel amid tightening Russian supply and elevated geopolitical risk.
- **Gold** - May test \$2,450 per ounce if the Fed's tone proves more dovish than expected.
- **China Trade Talks** - Working-level negotiations could resume following the FOMC meeting, with any tariff suspension likely to lift global risk sentiment.

## Crypto and Digital Assets Outlook

- **Bitcoin (around \$60,000)** - Trading range-bound ahead of the Fed decision, supported by steady ETF inflows and institutional accumulation.
- **Ethereum (around \$2,700)** - Attention remains on the Deneb network upgrade and restaking adoption trends.

MasterBOT (\$BOT): The smaller AI-linked altcoin has drawn attention ahead of NVIDIA's GTC event, with a market capitalisation of approximately \$36.1 million. Given its association with the AI narrative, short-term volatility and speculative trading activity may increase as event-driven flows emerge. The coin may experience brief momentum-driven price movements as traders position around the conference.

## Key Watchpoints for Investors

- Federal Reserve communication tone and guidance.
- U.S. GDP and Core PCE data validation of a soft-landing narrative.
- ECB and Euro Area CPI confirming disinflation.
- Divergent central-bank paths between the BoC, ECB, and BoJ.
- NVIDIA GTC announcements and their impact on the AI sector.
- Oil and commodity volatility under renewed sanctions pressure.

## Overall Outlook

Markets enter a data-heavy week led by multiple rate decisions, GDP prints, and high-profile corporate earnings. The base case expects the Fed to deliver a modest cut, supporting a mild dollar decline, lower yields, and sustained equity strength. Upside risks include strong corporate guidance and positive AI announcements from GTC. Downside risks revolve around hawkish central-bank communication or weaker U.S. data. Overall tone: cautiously constructive, with resilience in earnings and easing financial conditions sustaining investor optimism through early November.