Understanding commodity markets: the role of diverse participants and speculation

4 September 2025

What makes commodity markets function well?

Well-functioning energy markets are essential tools for financing and risk-managing Europe's transition to lower costs and decarbonised energy sources. Energy derivatives markets, including natural gas hubs such as the Title Transfer Facility (TTF), rely on an 'ecosystem' of diverse market participants with a variety of trading motivations: to hedge risk, to invest, or to profit from price movements. Energy markets benefit from this diversity because it ensures **liquidity**, **resilience**, and **efficient price discovery**.[1]

Liquidity is the feature of a market that enables a buyer or seller to complete a transaction quickly without causing a material change in the price of the commodity. A more liquid market is likely to have lower bid–ask spreads and the ability to transact greater volumes at that bid–ask spread (referred to as 'market depth'). When looking to hedge risk, market participants often value liquidity over the precision of the hedge, thereby accepting a basis risk over a liquidity risk.[2]

As with all commodity markets, for every buyer (long position), there must be a seller (short position). This counterparty principle is enabled through the participation of entities with differing views on market movements, hedging needs, and risk appetites. For instance, a gas

[1] Oxera (2022), 'The European gas market', 13 December.
[2] For example, market participants may choose to hedge using a more liquid benchmark even if the underlying asset or commodity is not exactly the same as the one that is the source of the underlying risk exposure (e.g. choosing to hedge using the TTF rather than local hubs). This is because a precise hedge that cannot be readily traded is often deemed riskier than a less precise hedge with the option to exit and re-enter more readily. See Oxera (2022), 'The European gas market', 13 December, pp. 11–13.

producer seeking to hedge future sales (and therefore intending to take a short position) must find a counterparty willing to take the opposite side of this trade (i.e. a long position). This means that there need to be other market participants with different motivations for trading to complete the transaction.

Exchange operators and regulatory authorities (ACER, ESMA, and NCAs) closely monitor transactions and position data, and are equipped to prevent, detect, and investigate market abuse, with exchanges and Central Counterparties (CCPs) **enhancing transparency, risk management**, and **oversight**.[3]

The value of diverse trading motivations

There are at least four different motivations to enter into a transaction that are widely recognised, as follows.

- **Hedgers** seek to reduce their existing exposures to volatile commodity prices as either producers or buyers.
- **Speculators** are motivated to take on price risk by taking a position that brings additional market exposure. Speculators may have different views on how market prices will evolve and may wish to enter into either additional short or long trades to benefit from future price movements.
- **Arbitrageurs** simultaneously take offsetting positions in two or more instruments to benefit from price differentials across markets.
- **Market-makers** may also simultaneously provide competitive buy and sell orders to the market, thus benefitting from the bid–ask differential within that market.

There is no strict mapping between different categories of market participants and their underlying trading motivation. In particular, commercial firms, utilities, hedge funds, institutional investors, and others may pursue any of these strategies, and some may pursue more than one. A consequence of this is that a diverse ecosystem of market participants having different trading motivations can:

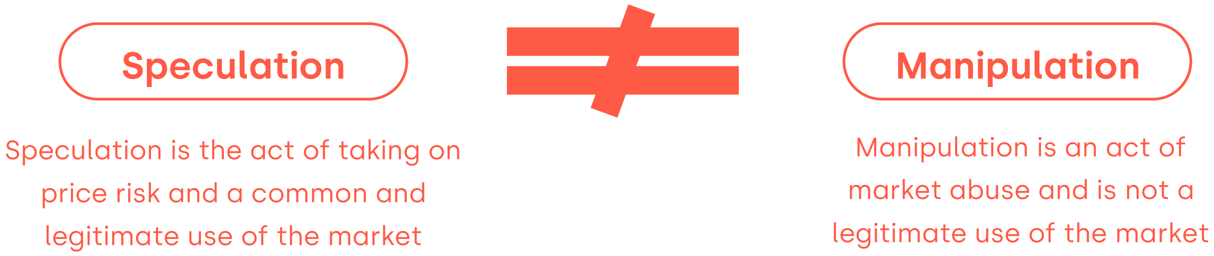
- reduce the absolute or relative **bid–ask spreads**, thereby improving trade execution and reducing transactions costs;

[3] Oxera (2022), 'The European gas market', 13 December, pp. 16–22.

- increase **market depth**, especially during periods with higher volatility, as may occur in the European gas market during periods with higher perceived geopolitical risk;
- facilitate **price discovery**, as differing views are continuously expressed through trading orders and completed transactions.[4]

The role of speculation and investment funds

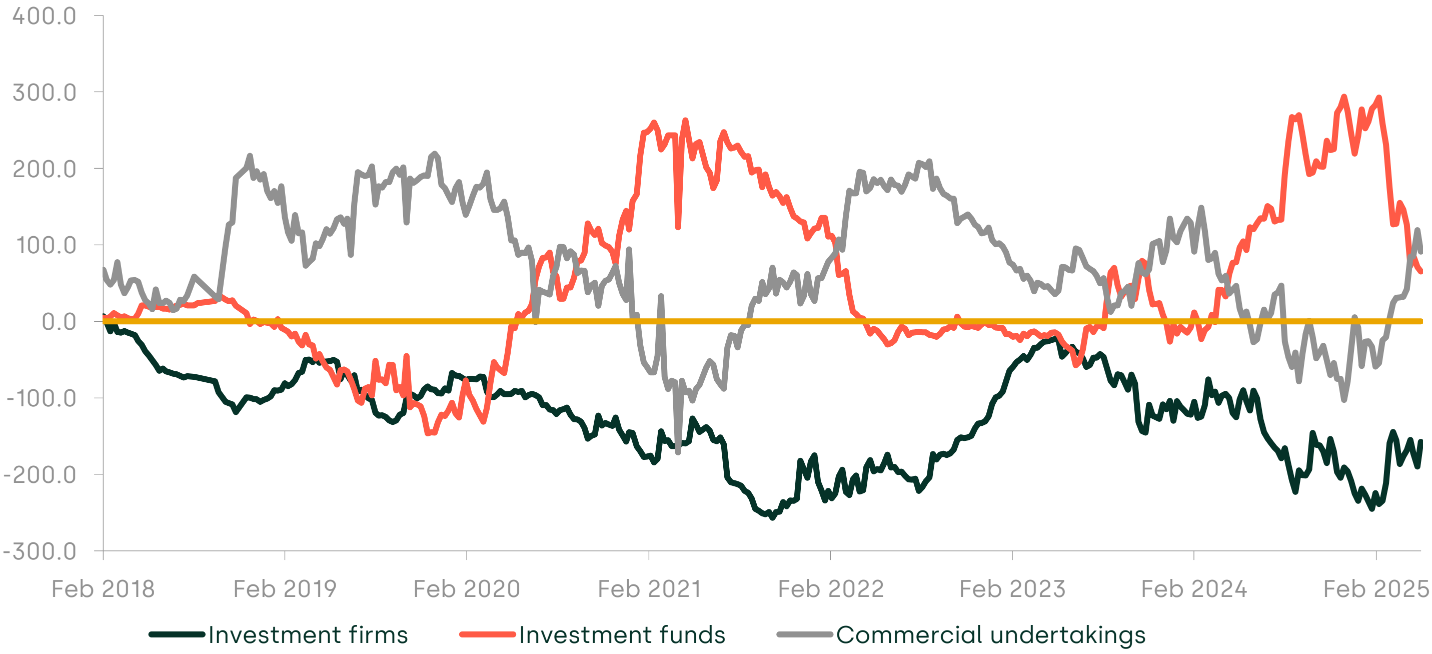
Investment funds, including hedge funds, play a critical role by providing additional liquidity, and expanding the range of trading strategies that are the expressions of a more diverse set of trading motivations.



As illustrated in Figure 1 below, Commitment of Traders (COT) reports show that the sum of all investment funds' positions often fluctuates—inversely to the sum of positions held by commercial undertakings, such as utilities, natural gas producers, and oil majors. This is often an indication of the diversity of market participants, with speculators ensuring that there are counterparties available to enable hedging.

[4] Oxera (2022), 'The European gas market', 13 December, pp. 22–25.

Figure 1 Net positions on ICE TTF (TWh)



Source: Oxera analysis, based on TTF COT reports.

Recent TTF price drivers: what does the data say?

Oxera analysis shows that recent volatility in TTF gas prices since 2024 has been largely driven by **underlying fundamentals**, such as:[5]

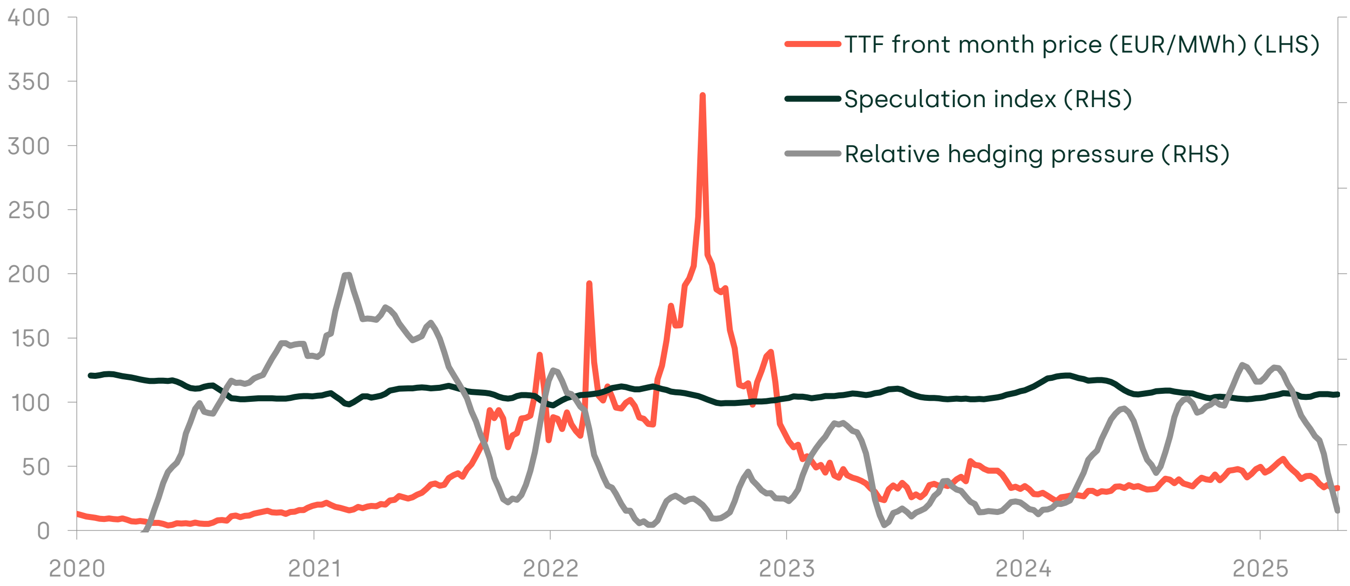
- a **colder-than-expected winter** and storage drawdowns;
- **EU storage mandates** boosting demand in early 2025;
- **shifts** in policy and geopolitical developments (e.g. Russia–Ukraine ceasefire prospects);
- **macroeconomic uncertainties**, including escalating global trade tensions.

While some financial firms have responded to changing fundamentals by adjusting their portfolios, these actions may reflect broader macroeconomic and geopolitical linkages. Indeed, the Working T 'speculation index', shown in Figure 2 below, measures speculative positions as a share of gross risk-reducing positions. Importantly, during periods of extreme market stress and high prices (e.g. during 2022), the

[5] Oxera analysis prepared for the Intercontinental Exchange (ICE), 19 May 2025.

variation in speculative activity was limited, while 'hedging pressure' increased significantly.[6]

Figure 2 TTF speculation index



Note: Hedging pressure expressed as a proportion of the average for Jan 2020–May 2024.
Source: Oxera, based on Bloomberg data and COT reports.

Oxera's analysis suggests that **speculation was not a key driver of volatility in the TTF gas market**. Recent empirical evidence (Batra et al., 2024) also suggests that speculative activity by hedge funds does not materially alter price trajectories in commodity spot markets.[7]

ECB evidence: lessons from oil markets

Further evidence on the limited impact of market speculation on commodity prices has been published by the European Central Bank (ECB). For example, the ECB's analysis of oil markets found that speculative trading does **not systematically amplify price shocks**. In fact, in normal periods, the impact of speculation on price variability is minimal. During periods with high perceived geopolitical risk, **greater speculative activity actually dampens volatility**—likely due to the additional liquidity provided by 'speculators' whose trading strategies are aimed at benefitting from greater expected price volatility. Based on

[6] Hedging pressure refers to the share of short positions held by hedgers seeking to reduce their risk exposure relative to the overall open interest.
[7] Batra, L., Turvey, C.G. and de Gorter, H. (2024), 'Financialization of commodity markets: how speculative activity shapes commodity spot prices', working paper, August.

Figure 2, the same principle appears to apply to the TTF gas market, where there is no clear observable relationship between the speculation index and price.

A balanced market needs all types of traders

Speculation and financial trading in commodity markets are often misunderstood. Not all financial participants are speculators, and not all commercial undertakings trade solely to hedge, as trading strategies depend on specific objectives and market conditions. The diversity of market participants, including financial firms such as proprietary trading firms, hedge funds, and investment funds contributes to the **liquidity, resilience, and efficiency** of commodity markets.

Speculative trading supports commercial risk management, facilitates a functioning market ecosystem and contributes to dampening volatility at times of geopolitical risk.