

Investors deserve hedging tools as European natural gas futures come of age

Published 17 September 2024

Nitesh Shah

Head of Commodities and Macroeconomic Research, WisdomTree Europe

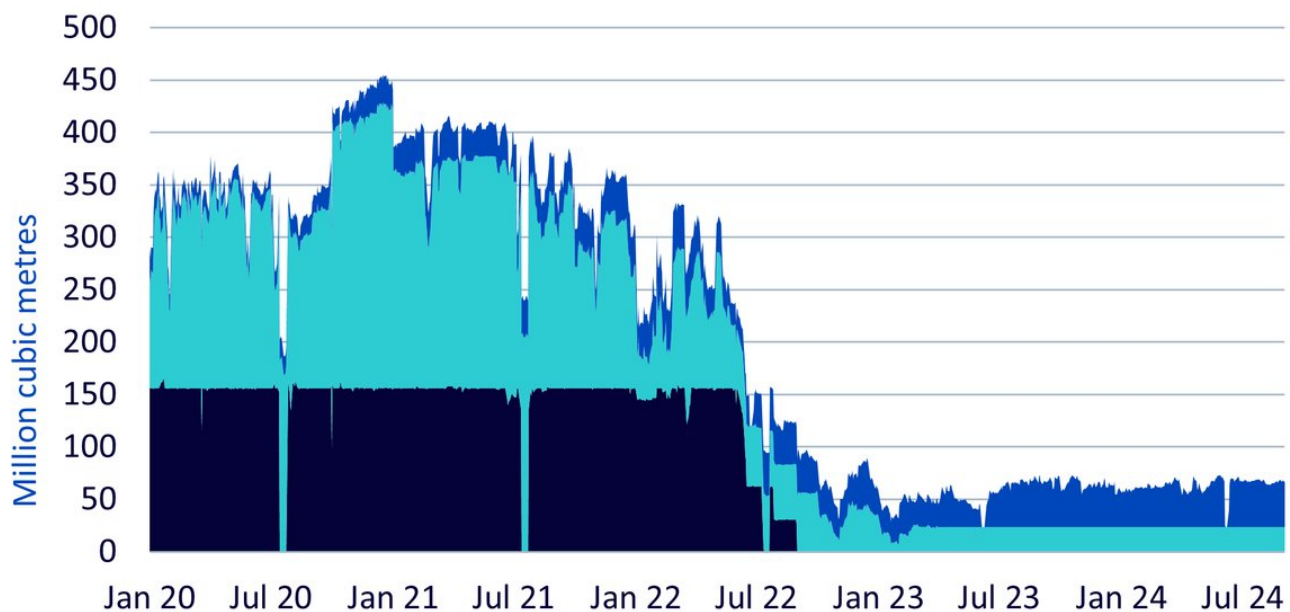
Key Takeaways

- The energy crisis of 2022 profoundly changed the energy markets of the EU.
- EU natural gas prices are considerably more volatile today compared to the pre-invasion normal.
- European investors need suitable tools for hedging their regional energy price volatility. US-based Henry Hub futures contract may not be the best choice.
- The Dutch Title Transfer Facility (TTF) has emerged as the main natural gas benchmark in Europe and global markets for natural gas remain fragmented.
- Related Products WisdomTree European Natural Gas Find out more

The European gas market reset

The energy crisis of 2022, triggered by the Russian invasion of Ukraine in a significant escalation of the Russo-Ukrainian War, which started in 2014, profoundly changed the energy markets of the European Union. Before the invasion in 2022, the European Union was highly dependent on Russian hydrocarbon imports. In 2021, EU countries imported 155 billion cubic metres (bcm) of Russian natural gas, which accounted for about 45 per cent of total gas imports¹. The Nord Stream 2 pipeline – a new gas pipeline between Russia and Germany – was suspended just before its planned opening. The Nord Stream 1 pipeline (which was an operating pipeline between the two countries) was put on maintenance even before the war but suffered damage in an act of sabotage during the Russo-Ukrainian War. Moreover, the EU has shunned pipeline gas inflows from Russia and developed a set of legislation called REPowerEU, designed to end Russian hydrocarbon dependency. As a result, natural gas pipeline flows from Russia to Europe collapsed.

Figure 1: Russian gas flow to Europe



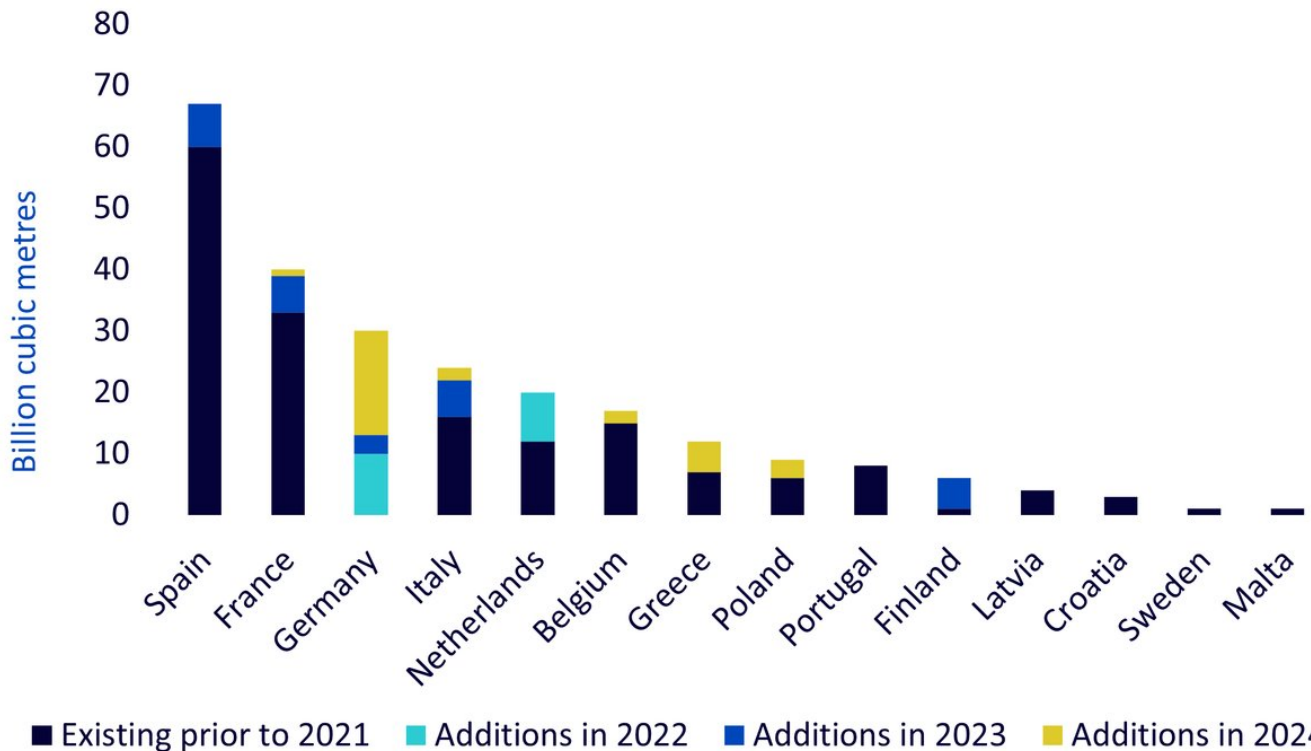
■ Russian flow to NW Europe ■ Russian Flow to CE Europe ■ Russian flow to SE Europe

Source: WisdomTree, Bloomberg. Data from January 2020 to August 2024. **Historical performance is not an indication of future performance, and any investments may go down in value.**

Russian gas displaced by LNG and renewables

While the ultimate goal of REPowerEU is to displace natural gas with renewable sources of energy, natural gas dependency is likely to continue for the near future and is important for the 'transitional' phase as natural gas has far lower greenhouse gas emissions than coal and oil. In fact, the EU has included natural gas in its taxonomy of green investments – so long as it is displacing coal. As natural gas is likely to remain a source of energy for the EU for the foreseeable future, we have seen a surge in the development of Liquefied Natural Gas (LNG) infrastructure in Europe, so that natural gas can be imported by ship from other countries to replace the Russian natural gas lost. Close to 30% of LNG capacity in EU has become operational since the start of the Russo-Ukrainian War.

Figure 2: Existing and new EU LNG capacity by member state



Source: WisdomTree, European Union Agency for the Cooperation of Energy Regulators: Analysis of the European LNG market developments, 2024 Market Monitoring Report. **Historical performance is not an indication of future performance, and any investments may go down in value.**

Additionally, more storage capacity has been built to store the imported LNG. A key difference in pipeline dependency before the invasion in 2022 and the new normal is that demand surges cannot be met by increasing flow from the pipeline's 'tap'. Stored reserves need to be drawn on. Thus, the balance of supply and demand is now more a function of storage capacity and capacity utilisation. We have seen prices collapse when storage is full and rise when storage is low.

European gas markets are now more volatile

European natural gas prices are more volatile in general now compared to the period before the invasion in 2022 (see table below). Prices could have been even more volatile, but several factors have mitigated this. Europe has been 'lucky' to have had back-to-back mild winters that have reduced the demand for natural gas. Also, a relatively soft economic performance over the past two years and an industrial recession during this period have meant that energy demand has been lower than expected.

Source: WisdomTree, Bloomberg. Based on monthly returns of first generic TTF Futures prices (not incorporating a roll). Pre-invasion: September 2005 - February 2022. Current: March 2022-August 2024. Historical performance is not an indication of future performance, and any investments may go down in value.

We expect that, with greater storage dependency (and lack of inbuilt supply flexibility from loss of pipeline sources), the potential for industrial recovery, and 'luck' wearing out, European natural gas prices will likely become even more volatile. Indeed, with the transition to renewable energy sources, a volatile/intermittent source, periodic increases in the 'call' on natural gas will bridge the gap between power supply and demand. That, too, will add to the price volatility of European natural gas.

This increased volatility allows tactical investors to engage in the market when supply disruptions or demand surges occur. Additionally, European investors need tools to hedge against energy price changes.

What natural gas benchmarks can be used for hedging?

Unlike crude oil, natural gas is a fragmented market. Crude oil has been transported around the world by ship in large volumes for decades, leading to truly global benchmark prices such as Brent. Regional oil prices trade at discounts/premiums to Brent but have a high degree of correlation.

Natural gas, on the other hand, is very regional. Most commodity investors will be familiar with the US Henry Hub (HH) benchmark as it features in most commodity basket benchmarks like Bloomberg Commodity or S&P GSCI. The Dutch Title Transfer Facility (TTF) has emerged as the primary benchmark in Europe. The Dutch TTF is a virtual trading venue for futures, physical and exchange trades of natural gas. It was established by Gasunie Transport Services B.V., a subsidiary of Gasunie, in 2003 as an alternative to the United Kingdom's National Balancing Point (NBP). The facility allows for gas to be traded within the Dutch Gas Network. The trading currency is in euros per megawatt-hour. The ICE – Index Exchange (Amsterdam) handles short-term gas and futures.

The TTF serves to promote gas trading. It is the largest transfer facility on mainland Europe. The TTF trades more than 14 times the amount of gas used in the Netherlands, indicating it is a pan-EU facility. The gas tariffs on the Dutch wholesale platform have become important reference tariffs for the rest of Europe.

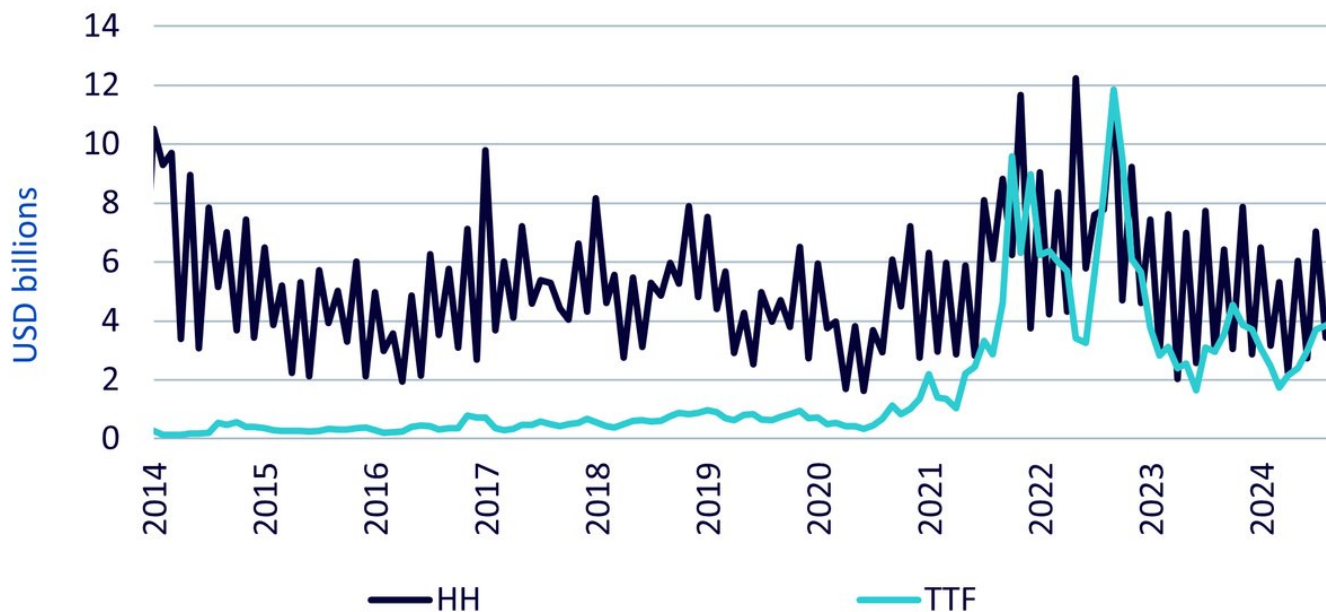
For European investors, TTF is likely to be the best hedging tool for European inflation (and an attractive option for tactical traders). As the table shows, TTF explains more of the variation in energy prices in Europe than HH.

Source: WisdomTree, Bloomberg. August 2005 - August 2024. Based on linear regressions of Euro Area Harmonised Energy component of Consumer Price Index against first generic TTF Futures prices and first generic TTF Futures prices (not incorporating a roll) all on a year-on-year basis. Historical performance is not an indication of future performance, and any investments may go down in value.

TTF's coming of age

Open interest in TTF futures have also increased substantially over the years. Prior to 2021, TTF lagged HH open interest by quite a margin. In 2021, we saw a large increase in open interest in TTF, which although started to decline towards the end of that year and into 2022, resurged in late 2022. Today, open interest in TTF is not that dissimilar to HH. This indicates the market has depth and should give investors the comfort that TTF futures are not an esoteric contract vulnerable to liquidity squeezes.

Figure 3: Open interest



Source: WisdomTree, Bloomberg. January 2014 – August 2024. **Historical performance is not an indication of future performance, and any investments may go down in value.**

WisdomTree European Natural Gas: democratising access to European gas markets

The TTF European natural gas market has essentially come of age. Those with access to the futures market directly have been able to take advantage of this development. However, European exchange-traded product investors have lacked an appropriate investment vehicle until now. WisdomTree has launched [WisdomTree European Natural Gas](#), which tracks front-month TTF natural gas futures, rolling on a monthly basis. We have once again democratised access to a coveted asset class and provided a new hedging tool. As we demonstrated earlier, European investors are better served with a European-based natural gas benchmark for hedging their inflation risk. European investors who are close to the news flow of supply disruptions and catalysts for demand surges (e.g., cold weather snaps in Europe) may also choose to use the product tactically.

The product trades in Euros (the same currency as the TTF Futures contract). Issued by WisdomTree Multi Asset Issuer PLC (a \$1.8bn issuer) and replicated through a fully collateralised swap with BNP Paribas.

The product tracks the BNP Paribas Rolling Futures W0 TZ Index, which incorporates the roll yield of the future².

WisdomTree European Natural Gas offers a unique and compelling opportunity for tactical investments as well as a hedging tool. Ukraine's recent incursion into Kursk, Russia on 14 August 2024, sent TTF prices sharply higher as the Sudzha gas transit corridor was at risk. Sudzha is the only transit hub in Russia that still processes gas en route to Ukraine. While prices fell after the risk subsided, had WisdomTree European Natural Gas been available at the time, investors could have used the tool as short-term tactical instrument.

1 The European Council on Foreign Relations

2 A roll yield is the return that is generated as the futures position approaches spot with the passage of time.

Important Risks Related to this Article

IMPORTANT INFORMATION

Marketing communications issued in the European Economic Area (“EEA”): This document has been issued and approved by WisdomTree Ireland Limited, which is authorised and regulated by the Central Bank of Ireland.

Marketing communications issued in jurisdictions outside of the EEA: This document has been issued and approved by WisdomTree UK Limited, which is authorised and regulated by the United Kingdom Financial Conduct Authority.

WisdomTree Ireland Limited and WisdomTree UK Limited are each referred to as “WisdomTree” (as applicable). Our Conflicts of Interest Policy and Inventory are available on request.

For professional clients only. Past performance is not a reliable indicator of future performance. Any historical performance included in this document may be based on back testing. Back testing is the process of evaluating an investment strategy by applying it to historical data to simulate what the performance of such strategy would have been. Back tested performance is purely hypothetical and is provided in this document solely for informational purposes. Back tested data does not represent actual performance and should not be interpreted as an indication of actual or future performance. The value of any investment may be affected by exchange rate movements. Any decision to invest should be based on the information contained in the appropriate prospectus and after seeking independent investment, tax and legal advice. These products may not be available in your market or suitable for you. The content of this document does not constitute investment advice nor an offer for sale nor a solicitation of an offer to buy any product or make any investment.

An investment in exchange-traded products (“ETPs”) is dependent on the performance of the underlying index, less costs, but it is not expected to match that performance precisely. ETPs involve numerous risks including among others, general market risks relating to the relevant underlying index, credit risks on the provider of index swaps utilised in the ETP, exchange rate risks, interest rate risks, inflationary risks, liquidity risks and legal and regulatory risks.

The information contained in this document is not, and under no circumstances is to be construed as, an advertisement or any other step in furtherance of a public offering of shares in the United States or any province or territory thereof, where none of the issuers or their products are authorised or registered for distribution and where no prospectus of any of the issuers has been filed with any securities commission or regulatory authority. No document or information in this document should be taken, transmitted or distributed (directly or indirectly) into the United States. None of the issuers, nor any securities issued by them, have been or will be registered under the United States Securities Act of 1933 or the Investment Company Act of 1940 or qualified under any applicable state securities statutes.

This document may contain independent market commentary prepared by WisdomTree based on publicly available information. Although WisdomTree endeavours to ensure the accuracy of the content in this

document, WisdomTree does not warrant or guarantee its accuracy or correctness. Any third party data providers used to source the information in this document make no warranties or representation of any kind relating to such data. Where WisdomTree has expressed its own opinions related to product or market activity, these views may change. Neither WisdomTree, nor any affiliate, nor any of their respective officers, directors, partners, or employees accepts any liability whatsoever for any direct or consequential loss arising from any use of this document or its contents.

This document may contain forward looking statements including statements regarding our belief or current expectations with regards to the performance of certain assets classes and/or sectors. Forward looking statements are subject to certain risks, uncertainties and assumptions. There can be no assurance that such statements will be accurate and actual results could differ materially from those anticipated in such statements. WisdomTree strongly recommends that you do not place undue reliance on these forward-looking statements.

WisdomTree Multi Asset Issuer PLC

WisdomTree Multi Asset Issuer PLC (the "Issuer") issues products under a Prospectus ("WTMA Prospectus") approved by the Central Bank of Ireland, drawn up in accordance with the Directive 2003/71/EC. The WTMA Prospectus has been passported to various European jurisdictions including the UK, Italy and Germany and is available on this document.

WisdomTree European Natural Gas

The BNP Paribas Rolling Futures W0 TZ Index is the exclusive property of BNP Paribas ("BNPP"). The BNP Paribas Rolling Futures W0 TZ Index is used by WisdomTree Multi Asset Management Limited under licence. The Index-linked Securities/Index-linked notes are not endorsed or approved in any way by BNPP. BNPP do not make any warranties whatsoever in relation to the BNP Paribas Rolling Futures W0 TZ Index and are not liable for any losses caused by the use thereof.

The methodology of and rules governing the index (the "Index Methodology" and the "Index") are proprietary and shall not be reproduced or disseminated without the prior written consent of the "Index Sponsor" (as defined in the "Index Rules" **available on <http://www.wisdomtree.eu/home>**). None of the Index Sponsor, the index calculation agent (where such party is not also the Index Sponsor, the "Index Calculation Agent") nor, where applicable, the index Investment Advisor (the "Index Investment Advisor") guarantee that there will be no errors or omissions in computing or disseminating the Index. The Index Methodology is based on certain assumptions, certain pricing models and calculation methods adopted by the Index Sponsor, the Index Calculation Agent and, where applicable, the Index Investment Advisor, and may have certain inherent limitations. Information prepared on the basis of different models, calculation methods or assumptions may yield different results. You have no authority to use or reproduce the Index Methodology in any way, and neither the Index Sponsor nor any of its affiliates shall be liable for any loss whatsoever, whether arising directly or indirectly from the use of the Index or Index Methodology or otherwise in connection therewith. The Index Sponsor reserves the right to amend or adjust the Index Methodology from time to time in accordance with the rules governing the Index and accepts no liability

for any such amendment or adjustment. Neither the Index Sponsor nor the Index Calculation Agent are under any obligation to continue the calculation, publication or dissemination of the Index and accept no liability for any suspension or interruption in the calculation thereof which is made in accordance with the rules governing the Index. None of the Index Sponsor, the Index Calculation Agent nor, where applicable, the Index Investment Advisor accept any liability in connection with the publication or use of the level of the Index at any given time. The Index Methodology embeds certain costs in the strategy which cover amongst other things, friction, replication and repo costs in running the Index. The levels of such costs (if any) may vary over time in accordance with market conditions as determined by the Index Sponsor acting in a commercially reasonable manner. The Index Sponsor and its ailiates may enter into derivative transactions or issue financial instruments (together, the "Products") linked to the Index. The Products are not in any way sponsored, endorsed, sold or promoted by the sponsor of any index component (or part thereof) which may comprise the Index (each a "Reference Index") that is not ailiated with BNP Paribas (each such sponsor, a "Reference Index Sponsor"). The Reference Index Sponsors make no representation whatsoever, whether express or implied, either as to the results to be obtained from the use of the relevant Reference Index and/or the levels at which the relevant Reference Index stands at any particular time on any particular date or otherwise.

No Reference Index Sponsor shall be liable (whether in negligence or otherwise) to any person for any error in the relevant Reference Index and the relevant Reference Index Sponsor is under no obligation to advise any person of any error therein. None of the Reference Index Sponsors makes any representation whatsoever, whether express or implied, as to the advisability of purchasing or assuming any risk in connection with the Products. The Index Sponsor and its ailiates have no rights against or recourse to any Reference Index Sponsor should any Reference Index not be published or for any errors in the calculation thereof or on any other basis whatsoever in relation to any Reference Index, its production, or the level or constituents thereof. The Index Sponsor and its ailiates shall have no liability to any party for any act or failure to act by any Reference Index Sponsor in connection with the calculation, adjustment or maintenance of the relevant Reference Index and have no ailiation with or control over any Reference Index or the relevant Reference Index Sponsor or the computation, composition or dissemination of any Reference Index. Although the Index Calculation Agent will obtain information concerning each Reference Index from publicly available sources that it believes reliable, it will not independently verify this information. Accordingly, no representation, warranty or undertaking (express or implied) is made and no responsibility is accepted by the Index Sponsor or any of its ailiates nor the Index Calculation Agent as to the accuracy, completeness and timeliness of information concerning any Reference Index. The Index Sponsor and/or its ailiates may act in a number of dierent capacities in relation to the Index and/or products linked to the Index, which may include, but not be limited to, acting as market-maker, hedging counterparty, issuer of components of the Index, Index Sponsor and/or Index Calculation Agent. Such activities could result in potential conflicts of interest that could influence the price or value of a Product.

For Investors in Switzerland – Qualified Investors

This document constitutes an advertisement of the financial product(s) mentioned herein.

In Switzerland, this communication is only targeted at Qualified Investors.

The prospectus and the key investor information documents (KID) are available from WisdomTree's website: **https: //www.wisdomtree.eu/en-ch/resource-library/prospectus-and-regulatory-reports**

For Investors in Monaco: This communication is only intended for duly registered banks and/or licensed portfolio management companies in Monaco. This communication must not be sent to the public in Monaco.