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The European energy crisis, the Dutch TTF, and the market correction mechanism: a financial markets perspective

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ABSTRACT

In September 2022, the Title Transfer Facility (TTF) prices spiked at unprecedented levels. For various reasons, including the Russian invasion of Ukraine, Europe was facing an energy crisis: gas supply was significantly reduced while demand remained unchanged. Policymakers responded with a variety of measures, including regulatory interventions on the TTF market. While seeking to improve the situation in the ‘real world economy’, these measures have an important financial regulatory angle. This article investigates the potential impact of these interventions, in particular of the Market Correction Mechanism, on the wholesale gas market from a financial markets perspective. Considering, amongst others, observations from the EU Agency for the Cooperation of Energy Regulators, the European Securities and Markets Authority, and the European Central Bank, it appears that these interventions may have unintended negative consequences in light of the functioning and attractiveness of the Capital Markets Union and achieving strategic autonomy.

INTRODUCTION

As a consequence of the war in Ukraine, the gas supply from Russia to the European Union (EU) has been reduced significantly.¹ As the demand side did not reduce in a similar way, there has been a significant mismatch between energy supply and demand in parts of Europe. This has resulted in high prices, on both the wholesale markets and through the distribution channels for consumers. The Dutch Title Transfer Facility (TTF), a virtual trading point (VTP) and marketplace for natural gas in the Netherlands, has received significant attention.² The reason is, in short, the significant increase in TTF prices, especially during August 2022.³ European policymakers raised a variety of concerns and introduced corresponding legislative proposals aiming to address

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¹ See eg European Council, ‘Infographic – where does the EU’s gas come from?’ <<https://www.consilium.europa.eu/en/info/graphics/eu-gas-supply/>> accessed 25 March 2024; M Flanagan and others, ‘How a Russian Natural Gas Cutoff Could Weigh on Europe’s Economies’ (IMF Blog, 19 July 2022) <<https://www.imf.org/en/Blogs/Articles/2022/07/19/blog-how-a-russias-natural-gas-cutoff-could-weigh-on-european-economies>> accessed 25 March 2024; M Seddon and D Sheppard, ‘Russia Switches off Europe’s Main Gas Pipeline until Sanctions are Lifted’ *Financial Times* (5 September 2022) <<https://www.ft.com/content/2624cc0f-57b9-4142-8bc1-4141833a73dd>> accessed 25 March 2024.

² For a general introduction, see Oxera, ‘The European Gas Market – Report prepared for ICE’ (13 December 2022) <<https://www.oxera.com/wp-content/uploads/2022/12/Oxera-Gas-Trading-Report-v2.pdf>> accessed 25 March 2024.

³ D Sheppard and E Terazono, ‘Europe Gas Prices Hit Record as Crisis Threatens to Trigger Recession’ *Financial Times* (26 August 2022) <<https://www.ft.com/content/ef02dd38-7cc6-4c13-914e-e2b6b2b8ee9d>> accessed 25 March 2024.

the disruptive price developments on the TTF market. This article examines how the TTF market works and discusses some of the main policy concerns within this context. This is done specifically from a financial markets point of view: while a variety of measures have been taken, including for example EU joint gas purchase and diversifying (and ‘greening’) energy supply, the focus in this article is on the TTF market. It examines the tension between the immediate ‘real world’ economic impact on the one hand and the financial markets and financial regulatory side on the other. While the comprehensive set of measures has been taken with the best intentions, the question is raised whether its impact on the functioning of the TTF market is in line with the policy objectives, or whether there may be unintended and undesirable consequences.

This article is organized as follows: the next paragraph examines the working of the TTF and gas market. The following paragraph introduces the financial markets and financial regulatory perspective. The fourth paragraph sets out the market turmoil following the invasion of Ukraine. The fifth paragraph examines the details of the EU regulatory policy initiatives taken affecting the TTF market. The next paragraph contains an evaluation of these initiatives, taken into consideration amongst others the evaluation by the EU Agency for the Cooperation of Energy Regulators (ACER) and European Securities and Markets Authority (ESMA). This is followed by some concluding observations.

GAS TRADING AND THE ROLE OF TTF

Looking at the physical side of gas supply in Western Europe, Gasunie Transport Services (GTS) is the physical network in the Netherlands for the transportation of gas.⁴ Due to the large amount of gas previously available from the Groningen gas field and its role in Western Europe, the network is well developed. It contains entry- and delivery points, including gas fields and storage facilities, ports, and pipelines. There are many practical issues and difficulties in operating such a network, for example significant differences between types of gas depending on the level of calorific and not all transport systems, that is pipelines, can handle every type. The recent move from Groningen gas towards Liquefied Natural Gas (LNG) is not without difficulties: for example, LNG needs to be vaporized before it can enter the Dutch pipelines, either in the terminal in Rotterdam or as per September 2023 in Eemshaven.

On top of this physical network and exchange sits TTF as a virtual trading point: gas which is already present in the GTS system can (subject to market rules, transactions, etc.) be transferred to different market participants.⁵ In other words, gas which is present in the system somewhere between an entry point and an exit point, for example in storage facilities or in the distribution network, can be sold by the original claimant of title to the available gas to the purchaser obtaining title to the gas to which the gas is subsequently transferred. By way of example, the Nederlandse Aardolie Maatschappij (Dutch Oil Company, NAM) which injected gas from Groningen into the GTS, received payment via TTF, while downstream Dutch energy companies paid via TTF for the delivery of this gas. The contracts traded on TTF therefore result in physical settlement. The TTF is, as said, the virtual entry or exit point, or the virtual marketplace for gas in the Netherlands and connected regions. Other hubs exist with a similar functions for their respective regions and pipeline systems, although they are often not of the same magnitude. The main reason for trading in gas contracts on the TTF (and other hubs) is to allow buyers and sellers of gas to lock into a predetermined price level, hedging or mitigating their risks related to price fluctuations and, where necessary, to anticipate on the needs for gas consumption in the (short term) spot markets.

⁴ For a general introduction, see A Honoré, ‘The Dutch Gas Market: Trials, Tribulations, and Trends’ (May 2017) Oxford Institute for Energy Studies, OIES Paper NG118 <<https://www.oxfordenergy.org/publications/dutch-gas-market-trials-tribulations-trends/>>; Autoriteit Financiële Markten, ‘Trend Monitor 2023’ <<https://www.afm.nl/~profimedia/files/afm/trendzicht-2023/afm-trendzicht-2023-eng.pdf>> 55–60; Gasunie Transport Services, ‘Entry & exit capacity’ <<https://www.gasunietransportservices.nl/en/about-gts/gastransport/entry-exitcapacity>> accessed 25 March 2024.

⁵ Gasunie Transport Services, ‘TTF’ <<https://www.gasunietransportservices.nl/en/about-gts/gastransport/ttf>> accessed 25 March 2024.

The worldwide hubs play an important role in the gas markets. They are used by network users to transfer gas between each other, for example through pipelines or as LNG, and as a central pricing point. There are several of these hubs in the EU, for example, the aforementioned Dutch TTF, but also the German Trading Hub Europe (THE), and Belgian Zeebrugge (Beach).⁶ Note that these European hubs have been established in line with the aim of creating a common, liberalized and competitive European gas market, as contemplated by EU Directive 98/30/EC.⁷ This is set out further in for example the 'Gas target model', in which a competitive European gas market was envisaged with several entry points and VTPs.⁸ Of course, there are various major hubs outside the EU as well, such as the British National Balancing Point (NBP). TTF and NBP are the largest two by traded volume in Europe. However, volumes traded on TTF have increased sharply over the past few years while NBP has declined, partly due to the need for hedging and risk management in Euro rather than Sterling.⁹ Moreover, TTF is regarded as a well-functioning gas market: amongst European hubs, for example, it exposes the least amount of price bubbles, which would occur when prices would deviate from their fundamental value and price formation is less efficient.¹⁰

From a global perspective, TTF and NBP are the relevant European reference prices due to their liquidity.¹¹ TTF is the leading reference price for a large part of Western Europe, while NBP is the benchmark for the UK and Ireland.¹² For instance, they are used to price LNG cargo heading for Europe. Henry Hub (HH), a distribution hub in the gas pipelines in Louisiana, is the reference price for North America, ie the USA, Canada, and Mexico. HH is used for pricing gas for example within the USA, as well as risk management. As regards East Asia, it is worth mentioning the Japan Korean Marker (JKM), even though it is regarded as less developed than HH, TTF, or NBP. In short, the gas market is a global market, but with physical limitations posed by infrastructure such as pipelines and terminals.¹³

It is important to realize the role played by TTF goes well beyond its link to the GTS system. TTF is used as a reference price, for example, for long-term gas contracts throughout Europe, despite its regional function as regards the actual physical supply within the region, as explained above. For example, the Public Gas Corporation of Greece (DEPA) arranged for a long-term gas contract with Gazprom in early 2022, that is before the Ukraine invasion, where the gas price was indexed to the TTF price by 80 per cent until 2026, the remainder being indexed to oil prices.¹⁴ DEPA is quoted as stating that the contract included 'very competitive pricing' compared with current European gas prices. This represents a trend of moving long-term gas contracts away from indexing against oil prices towards indexing against TTF.¹⁵ A different example of moving towards TTF indexed long-term contracts was provided in May 2018: the European Commission (the Commission) adopted a commitment decision in an anti-trust case brought by several Central-

⁶ P Heather, 'European Traded Gas Hubs: German Hubs about to Merge' (July 2021) Oxford Institute for Energy Studies, OIES Paper NG 170 <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2021/07/European-Traded-Gas-Hubs-NG-170.pdf>> accessed 25 March 2024.

⁷ Directive 98/30/EC of the European Parliament and of the Council of 22 June 1998 concerning common rules for the internal market in natural gas, OJ L 204 <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:31998L0030>> accessed 25 March 2024.

⁸ Council of European Energy Regulators, 'CEER Vision for a European Gas Target Model Conclusions Paper' <<https://www.ceer.eu/documents/104400/-/-/4201834c-3800-66a4-6d4b-042a97367a8b>> accessed 25 March 2024.

⁹ *ibid* 6.

¹⁰ B Akcora and O Kandemir Kocaaslan, 'Price Bubbles in the European Natural Gas Market between 2011 and 2020' (2023) 80 Resources Policy 103186 <<https://doi.org/10.1016/j.resourpol.2022.103186>> accessed 25 March 2024.

¹¹ *ibid* 16–18.

¹² See eg V Jotanovic and RL D'Ecclesia, 'The European Gas Market: New Evidences' (2021) 299 Annals of Operations Research 963–99 <<https://doi.org/10.1007/s10479-020-03714-5>> accessed 25 March 2024.

¹³ For a global overview, see eg International Energy Agency, 'Global Gas Security Review 2023' (2023) <<https://iea.blob.core.windows.net/assets/341714fd-baea-4f2f-9bc5-66be97f57522/GlobalGasSecurityReview2023IncludingTheGasMarketReportQ32023.pdf>> accessed 25 March 2024.

¹⁴ Angeliki Koutantou, 'Greece's DEPA, Gazprom Agree Long-term Gas Deal' *Reuters* (Athens, 4 January 2022) <<https://www.reuters.com/business/energy/greeces-depa-gazprom-agree-long-term-gas-deal-2022-01-04/>> accessed 25 March 2024.

¹⁵ Generally speaking, long-term gas contracts include clauses which allow arbitration to review the pricing levels, see J Freeman and M Levy (eds), *Gas and LNG Price Arbitrations* (Globe Law and Business 2020) <<https://lk-k.com/wp-content/uploads/2020/04/DONDE-LEVY-in-FREEMAN-LEVY-Eds-Gas-LNG-Price-Arbitrations-2020-The-Arbitrators-Role-pp-131-141.pdf>> accessed 25 March 2024.

and Eastern European countries against Gazprom.¹⁶ It forced a revision of long-term gas contracts indexed against oil prices towards TTF prices. In summary, this trend has, over roughly the past decade, ensured that a significant number of EU Member States entered into long-term supply contracts which are indexed against TTF prices—even though there is no physical link with the GTS. Moving away from the common crude oil Brent index as a reference price is understandable, as research shows that although the gas price is not strongly linked to oil any more; instead the fundamental factors determining gas prices are supply and demand in the gas market.¹⁷

FINANCIAL MARKETS AND REGULATION

General considerations

The previously described physical (or economic) aspects of gas trading are intertwined with financial markets and regulation. TTF-related products, such as the front-month (future) contracts, are traded on ICE Endex Amsterdam. This is a (regulated) trading platform where bids and offers can be met by way of a central limit order book (CLOB). As such, it is regulated by the Markets in Financial Instruments Directive II (MiFID II) and Markets in Financial Instruments Regulation (MiFIR, together often referred to as 'MiFID II').¹⁸ Once a trade is concluded, it is brought to a Central Counterparty (CCP) for clearing, typically a role fulfilled by ICE Clear Europe. This post-trading trajectory is regulated by the European Market Infrastructure Regulation (EMIR).¹⁹ Both MiFID II and EMIR are cornerstones of the financial regulatory framework established in the aftermath of the Global Financial Crisis of 2008. MiFID II is aimed at achieving transparent price formation in financial markets, while EMIR is aimed at managing counterparty risk in derivatives through clearing. Together they are of fundamental importance as they aim to resolve shortcomings in derivatives trading and risk management exposed by the Financial Crisis.²⁰ This regulatory framework therefore also applies to the trading in certain energy derivatives, including TTF derivatives. Moreover, they make up a fundamental part of the EU's single capital market, the Capital Markets Union (CMU).²¹ Note also the existence of European Supervisory Authorities such as ESMA and its role within the CMU.²²

While MiFID II and EMIR are mostly concerned with the market infrastructure and participants directly, there are also regulatory requirements on trading behaviour and market functioning itself. For example, the Market Abuse Regulation (MAR) is applicable in the TTF-derivatives market prohibiting market manipulation.²³ For non-financial instruments, the Regulation on Wholesale Energy Market Integrity and Transparency (REMIT) is introduced against insider trading and market manipulation in (spot) energy markets under supervisory coordination of the EU Agency for the Cooperation of Energy Regulators (ACER).²⁴ ACER has issued guidelines to

¹⁶ Commission Decision relating to a proceeding under art 102 of the Treaty on the Functioning of the European Union (TFEU) and art 54 of the EEA Agreement, *Case AT.39816 – Upstream Gas Supplies in Central and Eastern Europe* <https://ec.europa.eu/competition/antitrust/cases/dec_docs/39816/39816_10148_3.pdf> accessed 25 March 2024.

¹⁷ D Hulshof, JP van der Maat and M Mulder, 'Market Fundamentals, Competition and Natural-gas Prices' (2016) 94 Energy Policy 480–91 <<https://doi.org/10.1016/j.enpol.2015.12.016>> accessed 25 March 2024.

¹⁸ Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (recast) OJ L 173/349 <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0065>> accessed 25 March 2024.

¹⁹ Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories OJ L 201/1 <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012R0648>> accessed 25 March 2024.

²⁰ W Poole, 'Causes and Consequence of the Financial Crisis of 2007-2009' (2010) 33 Harvard Journal of Law & Public Policy 421.

²¹ European Commission, 'Capital Markets Union – A plan to unlock funding for Europe's growth' <https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/capital-markets-union_en> accessed 25 March 2024.

²² N Moloney, *The Age of ESMA, Governing EU Financial Markets* (Hart Publishing 2018); MPM van Rijsbergen, *Legitimacy and Effectiveness of ESMA's Soft Law* (Elgar Studies in Law and Regulation, Edward Elgar 2021); MPM van Rijsbergen and E Rogge, 'Changes to the European Financial Supervisory Agencies' Soft Law Powers: Legitimacy Problems Solved or New Puzzles Created?' (2022) 14 European Journal of Legal Studies 219–54 <<https://doi.org/10.2924/EJLS.2022.016>> accessed 25 March 2024.

²³ Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (market abuse regulation) and repealing Directive 2003/6/EC of the European Parliament and of the Council and Commission Directives 2003/124/EC, 2003/125/EC and 2004/72/EC OJ L 173/1 <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0596>> accessed 25 March 2024.

²⁴ Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency OJ L 326/1 <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32011R1227>>

provide further clarification on REMIT, including concepts such as inside information, insider trading, and market manipulation.²⁵ Combining market surveillance under MAR and REMIT enables a complete view of both the spot and derivatives energy- and commodity markets, for example during the periods of market turmoil central to this article. The aforementioned MiFID II by way of Article 51(1) also ensures that markets are fair, orderly and efficient. This touches on the fundamental ways in which markets operate and must be kept in mind when discussing some of the recent regulatory interventions later on.

On venue trading

Trading in energy derivatives takes place both ‘on venue’ (exchange trade derivatives, ETD) and over-the-counter (OTC). A trading venue brings together a wide variety of market participants looking to buy or sell gas (in this case) in future contracts in order to hedge their risks, which in turn aids the price formation process. Market participants include for example commodity trading firms.²⁶ Some of these are linked with large industrial groups, such as major oil companies, for example Shell or BP. It is not only these upstream firms which participate: downstream energy- or power-suppliers such as Eneco and Vattenfall are active participants as well. Moreover, large commodity traders such as Trafigura, Vitol, and Glencore are all trading actively on this platform. Lastly, some of the larger investment banks operate commodity trading desks active in these markets.

A significant part of TTF trading occurs on the venue, in particular ICE Endex in Amsterdam for derivatives, but note also the European Energy Exchange (EEX) in Germany including spot trading.²⁷ These venues are both authorized as a Regulated Market (RM) under Article 44 MiFID II. In accordance with Article 4(21), an RM is a multilateral system operated by a market operator, bringing together multiple third-party buying and selling interests in ‘financial instruments’ resulting in a contract. The RM operates under a set of rules agreed between the venue and its members.²⁸ Derivative contracts related to commodities and which can be physically settled are a ‘financial instrument’ in the context of MiFID II, that is they are listed in Section C of Annex I. The consequences of being an RM under MiFID II will become apparent throughout this article.

It should be noted that there is no reason TTF must be traded on a venue within the EU: it could just as well be traded on a trading platform in the UK or the USA—it just so happens that historically it is based in the Netherlands and trading generally does not just move, as this can be costly, unless it really has to. Moreover, market participants trading TTF within the EU do not need to be located within the EU themselves. ICE Endex is, for example classified as a Recognized Overseas Investment Exchange (ROIE) by the UK’s Financial Conduct Authority (FCA) and it is recognized by the Commodity Futures Trading Commission (CFTC) as an authorized Foreign Board of Trade (FBOT).²⁹ This provides access for the UK and the US market participants within the limits of the respective regulatory frameworks.³⁰

accessed 25 March 2024; see also: Liebrich M Hiemstra, ‘REMIT: ten years and counting’ (2020) 14 Law and Financial Markets Review 237–48 <<https://doi.org/10.1080/17521440.2020.1805870>> accessed 25 March 2024.

²⁵ ACER, ‘ACER Guidance on the application of Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency 6th edition’ (22 Jul 2022) <https://acer.europa.eu/en/remit/Documents/ACER_Guidance_on_REMIT_application_6th_Edition_Final.pdf> accessed 25 March 2024.

²⁶ For a general introduction to commodity trading, see C Pirrong, ‘The Economics of Commodity Trading Firms’ (2014) <<https://www.smallake.kr/wp-content/uploads/2014/04/economics-of-ctfs.pdf>> accessed 25 March 2024.

²⁷ For ICE Endex, see ICE, ‘ICE Endex – Dutch TTF Natural Gas Futures’ <<https://www.ice.com/products/27996665/Dutch-TTF-Natural-Gas-Futures/>> accessed 25 March 2024, and for EEX, see EEX, ‘Trading Gas Spot and Derivatives’ <<https://www.eex.com/en/markets/natural-gas/trading-gas-spot-and-derivatives>> accessed 25 March 2024.

²⁸ ICE Endex, ‘Market Rules and Appendices Futures’ <https://www.theice.com/publicdocs/endex/ICE_Endex_Rules.pdf> accessed 25 March 2024.

²⁹ ICE, ‘Regulation: ICE works with regulators and policy makers around the world to ensure supervision, compliance and reliable operation of markets’ <<https://www.theice.com/endex/regulation>> accessed 25 March 2024, and Commodities Futures Trading Commission (CFTC), ‘Foreign Boards of Trade (FBOT): 28492 ICE Endex’ (1 October 2017) <<https://www.cftc.gov/IndustryOversight/IndustryFilings/ForeignBoardsofTrade/28492>> accessed 25 March 2024, and Financial Conduct Authority (FCA), ‘List of EEA market operators applying to become a recognised overseas investment exchange (ROIE)’ (4 Aug 2021) <<https://www.fca.org.uk/news/statements/roie-applications>> accessed 25 March 2024.

³⁰ In combination with art 10A Vrijstellingsregeling Wft.

In accordance with Article 55 MiFID II, any trades concluded on an RM are brought to a Central Counterparty (CCP) for clearing governed mostly by EMIR. The CCP is placed in between the two counterparties in order to reduce significantly any counterparty credit risk.³¹ As the CCP is placed in between all parties trading in these products, the overall risk in the system is reduced: all market participants have exposure towards the CCP only instead of a more complicated structure where all participants have exposure towards each other. Moreover, it is designed to reduce systemic risk in the financial system resulting from derivatives trading as observed during the Financial Crisis.³² By offsetting transactions between the members, or netting, the CCP reduces the risk associated with a default event of one or more of the counterparties or intermediaries. In order to manage its exposure to its members and to protect itself against a default of one of its members, the CCP will hold margins. Margins are a form of collateral, which covers the expected payment due from a member at the end of the contract. Initial margins are placed at the outset of the transaction while variation margins are calculated during the lifetime of the transactions. In order to calculate the margin requirements, the CCP will depend on the price available and observed in the corresponding markets. In the case of TTF derivatives, it means that there must be a liquid and transparent market such as currently on ICE Endex to determine margins required. The absence of a liquid and transparent market would mean that the CCP cannot determine the margins accurately making it more costly for market participants who shall bear the consequences of the absence of liquidity through higher margin calls.

In the case of trades concluded on ICE Endex (and ICE Futures Europe), the relevant CCP is ICE Clear Europe in London. This CCP is outside the EU but temporarily declared subject to equivalent supervision post-Brexit.³³ In practice, this means market participants can use it as if it was within the EU. Once a transaction TTF is concluded on ICE Endex, it is cleared through ICE Clear Europe. However, not all market participants trading on ICE Endex are also clearing members of ICE Clear Europe. In that case, a (clearing) bank, which itself is a clearing member, will provide clearing services to the market participant, that is their client.

OTC trading

A sizeable part of trading in TTF products, however, does not occur on venue as outlined above, but OTC. In this case, two parties trade bilaterally without using a trading venue resulting in less transparent price formation. Although market participants could find each other directly, in practice this is often facilitated by software providers such as Trayport.³⁴ When a transaction is concluded off venue, it can still be cleared through a CCP, for example by way of being registered as a 'block trade' on the venue.³⁵ This is not always the case, as many market participants prefer to use credit lines rather than to post cash collateral at the CCP.³⁶ This shifts the risks in the financial system. While the CCP is there to reduce such risks, access and usage can be costly and hence less attractive for smaller market participants. As will be discussed later on, the energy crisis increased pressure to loosen collateral requirements by allowing new asset categories of collateral at CCPs.³⁷

³¹ For a general introduction, see J Gregory, *Central Counterparties: Mandatory Central Clearing and Initial Margin Requirements for OTC Derivatives* (Wiley 2014).

³² Pool (n 20).

³³ ESMA, 'ESMA to Recognise Three UK CCPs from 1 January 2021' (28 September 2020) <https://www.esma.europa.eu/sites/default/files/library/esma71-99-1403_communication_ukccps_recognition_2020.pdf> accessed 25 March 2024.

³⁴ Trayport, 'Joule – the leading trading solution for energy markets' <<https://www.trayport.com/traders/joule/>> accessed 25 March 2024, and Trayport, 'Gas trading with Joule' <<https://www.trayport.com/markets/gas/>> accessed 25 March 2024.

³⁵ See ICE, 'Market Rules and Appendices' <https://www.theice.com/publicdocs/endex/ICE_Endex_Markets_B.V._Rules.pdf> accessed 25 March 2024, 58 onwards.

³⁶ For some of the issues related to increased margins, see V Eckert and N Buli, 'Explainer: How Margin Calls came to Threaten Europe's Energy Firms' *Reuters* (Frankfurt, 16 September 2022) <<https://www.reuters.com/business/energy/how-margin-calls-came-threaten-europes-energy-firms-2022-09-16/>> accessed 25 March 2024; 'Europe Props up Energy Firms amid Liquidity Crunch' *Reuters* (Frankfurt/Oslo 12 Sep 2022) <<https://www.reuters.com/markets/europe/europe-props-up-energy-firms-amid-liquidity-crunch-2022-09-09/>> accessed 25 March 2024; I Almeida and S Casey, 'German Energy Giant Uniper Gets \$11 Billion for Margin Calls' *Bloomberg* (4 January 2022) <<https://www.bloomberg.com/news/articles/2022-01-04/uniper-agrees-on-new-financing-due-to-commodities-volatility#xj4y7vzkg>> accessed 25 March 2024.

³⁷ European Securities and Markets Authority (ESMA), 'Final Report: Emergency measures on collateral requirements – draft Regulatory Technical Standards amending Commission Delegated Regulation (RTS) 153/2013' (14 October 2022) <<https://www.esma.europa.eu/press-news/esma-news/esma-2022-10-14-final-report-emergency-measures-on-collateral-requirements>> accessed 25 March 2024.

It is not always a matter of choice for market participants whether to clear or not. As already stated, if concluded on venue the transaction must be cleared. However, if the transaction was concluded OTC, there could still be requirements for it to be cleared as per the Clearing Obligation under Article 4 EMIR. This would depend on the classification of the market participants as well as whether the product traded is in scope of the Clearing Obligation. Several large financial institutions have commodity trading desks which are active, despite the physical delivery provisions. These are classified as 'Financial Companies' (FCs) under Article 2(8) EMIR and include credit institutions (banks) and investment firms authorized to provide MiFID-services.³⁸ Commodity trading firms are generally classified as 'Non-Financial Companies' (NFCs) under Article 2(9) the EMIR.³⁹ Note that Commodity trading firms generally benefit from the ancillary activities exemption under Article 2(1)(j) MiFID II, meaning they do not have to hold a MiFID II authorization to trade in commodity derivatives.⁴⁰ If one of the market participants is classified as a very large NFC, a so-called NFC+, or as an FC, then the transaction (if in scope) must be cleared. This approach would ensure that large firms are less exposed to counterparty risk, thus reducing systemic risk in the financial system, while smaller firms are not hit disproportionately.

For an NFC to be large enough to qualify as an NFC+ and fall under the clearing obligation, it has to cross the so-called clearing thresholds under Article 10 EMIR. These are thresholds on total notional amounts of different derivatives traded by the NFC, which, if exceeded, qualify the NFC as NFC+ and trigger the obligation for the NFC to centrally clear all their derivatives transactions. It should be noted that those derivatives traded for the purposes of hedging business risks do not count towards the clearing threshold determination, hence an energy company using TTF purely to hedge against adverse gas price movements does not add these thresholds. This approach would ensure market participants are not discouraged from entering into derivatives aimed at mitigating their risks. The correct level of the thresholds as well as the determination made by NFCs is therefore essential to make this approach work.

As said, in addition to the classification of the relevant counterparties, the product traded needs to be in scope of the clearing obligation. This is published in a public register by ESMA.⁴¹ The scope varies over time, depending on market developments, and while it contains some energy derivatives such as UK BNP Gas Futures, it does not include TTF derivatives. However, if an NFC crosses the thresholds for the Clearing Obligations due to large volume trading in TTF-derivatives, then it would be required to clear all (other) products which are within scope of the Clearing Obligation.

MARKET TURMOIL

Having discussed how the financial infrastructure, players and markets work, and having set out the broad outline of the regulatory framework, this section turns to the TTF market dynamics and the changes in supply and demand for gas over the past few years. It is useful to briefly recall the general trends in the year(s) prior before turning to the events of summer 2022 when TTF prices

esma.europa.eu/sites/default/files/library/esma91-372-2466_report_amended_rts_emergency_measures_on_collateral_requirements_article_463_emir.pdf accessed 25 March 2024.

³⁸ Note that the precise definition of FCs has been amended by the art 1(1) Regulation (EU) 2019/834 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 648/2012 as regards the clearing obligation, the suspension of the clearing obligation, the reporting requirements, the risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty, the registration and supervision of trade repositories and the requirements for trade repositories OJ L 141/42 <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019R0834&qid=1687010187123>> accessed 25 March 2024 (EMIR Refit).

³⁹ Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories OJ L 201/1 <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32012R0648>> accessed 25 March 2024.

⁴⁰ For more information on the 'minimum threshold-test' (previous 'market share test') and 'main business test' as per RTS 20 MiFID II, see European Commission, 'Investment market transparency – amended ancillary activity exemption (specifications)' (2021) <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13040-Investment-market-transparency-amended-ancillary-activity-exemption-specifications_en> accessed 25 March 2024.

⁴¹ European Securities and Markets Authority (ESMA), 'Public Register for the Clearing Obligation under EMIR' (26 May 2023) <https://www.esma.europa.eu/sites/default/files/library/public_register_for_the_clearing_obligation_under_emir.pdf> accessed 25 March 2024.

were at their peak.⁴² Before 2021, sharp price movements in day-ahead contracts tended to be limited and for a short duration, effecting typically one or two hubs only. An example of this is the so-called 'Baumgarten incident', where on 12 December 2017, an explosion at the Austrian Baumgarten gas hub led to a disruption in gas transmission in Europe, causing short but sharp moves in day ahead prices before settling back down.⁴³

A major development driving market dynamics and changing the balance in supply and demand was the coronavirus disease 2019 pandemic. Reduced economic activities worldwide saw a drop in demand for energy and other natural resources. This was followed recovery in demand due to the economy picking up again, contributing to a gradual rise in gas prices in 2021. Another factor contributing to the rising TTF prices was the significant reduction and eventual closure of the major gas fields in Groningen, the Netherlands.⁴⁴ Hence, due to an increase in demand and a decrease in supply, there has been a rise in TTF prices from 2020 onwards, which was steady at first but got spikier over time.⁴⁵ In numbers, the 1-day ahead and 1-month ahead contract was trading well below 25 EUR/MWh in early 2020, but had risen to 100 EUR/MWh around October 2021.

The next major development arrived, as anticipated, when Russia invaded Ukraine on 24 February 2022.⁴⁶ Various countries, in particular the USA, the UK, and the EU, imposed multiple rounds of economic sanctions on both Russian businesses and individuals. These were far reaching, including for example a ban from the global payment services system SWIFT.⁴⁷ In turn, Russia reduced its gas exports and countered further with programmes such as 'gas-for-rubbles'.⁴⁸ Not surprisingly, TTF prices spiked at almost 200 EUR/MWh in January 2022 EUR/MWh and just over 220 in March 2022.⁴⁹ The EU thus faced an energy crisis with disruptions and associated impact on the economy.⁵⁰ That said, EU countries heavily dependent on Russian gas slowly started to take countermeasures. In February 2022, Germany commenced planning the construction of two LNG ports Wilhelmshaven and Brunsbüttel in order to reduce its dependency on Russian gas by gearing up alternative supply routes.⁵¹

In a further move to reduce dependency on Russia, the Commission launched the REPowerEU plan in May 2022.⁵² This plan contained a strategy to transform the EU's energy system in two ways. First, it would reduce the dependency on fossil fuels from Russia, including gas. This could be achieved through common purchases of fossils and the diversification of supply by entering into long-term contracts with other suppliers. However, suppliers were in a strong position to renegotiate contracts: Algeria (Sonatrach) for example sought to renegotiate gas prices for Spain

⁴² P Heather, 'A Series of Unfortunate Events: Explaining European Gas Prices in 2021, the Role of the Traded Gas Hubs', The Oxford Institute for Energy Studies, Energy Insight 111 (March 2022) <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2022/03/Insight-111-Explaining-European-gas-prices-in-2021-the-role-of-the-traded-gas-hubs.pdf>> accessed 25 March 2024.

⁴³ A Hassel and C Egenhofer, 'Does Russian Gas Weaken Energy Security in Europe? Lessons from the Baumgarten Incident' Centre for European Policy Studies (CEPS) (19 December 2021) <<https://www.ceps.eu/ceps-publications/does-russian-gas-weaken-energy-security-europe-lessons-baumgarten-incident/>> accessed 25 March 2024.

⁴⁴ B Meijer, 'Dutch Confirm Plan to End Gas Production at Groningen Next Year' *Reuters* (Amsterdam, 24 September 2021) <<https://www.reuters.com/business/energy/dutch-confirm-plan-end-gas-production-groningen-next-year-2021-09-24/>> accessed 25 March 2024; and Government of the Netherlands, 'Groningen gas field on the back burner in October' (20 Jun 2022) <<https://www.government.nl/latest/news/2022/06/20/groningen-gas-field-on-the-back-burner-in-october>> accessed 25 March 2024.

⁴⁵ Autoriteit Financiële Markten (AFM), 'State of the Capital Markets 2022' (14 October 2022) <https://www.afm.nl/~/_profmedia/files/publicaties/2022/state-of-the-capital-markets-visuals.pdf?sc_lang=nl-nl&hash=3EAB6A45DD48BF7E63EF15D24343F857> accessed 25 March 2024, and Autoriteit Financiële Markten (AFM), (n 4) 54.

⁴⁶ M Skalamera, 'The Geopolitics of Energy after the Invasion of Ukraine' (2023) 46 *The Washington Quarterly* 7–24.

⁴⁷ European Commission, 'Ukraine: EU Agrees to Exclude Key Russian Banks from SWIFT' (2 March 2022) <https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1484> accessed 25 March 2024.

⁴⁸ Nina Chestney, 'Putin wants "unfriendly" Countries to Pay for Russian Gas in Roubles' (London 23 March 2022) *Reuters* <<https://www.reuters.com/business/energy/putin-says-russia-will-start-selling-gas-unfriendly-countries-roubles-2022-03-23/>> accessed 25 March 2024.

⁴⁹ For TTF data see eg Autoriteit Financiële Markten (n 4) 14.

⁵⁰ For more details, see G Di Bella and others, 'Natural Gas in Europe: The Potential Impact of Disruptions to Supply' (July 2022) IMF Working Papers WP/22/145 <<https://www.imf.org/-/media/Files/Publications/WP/2022/English/wp22145-print.pdf.aspx>> accessed 25 March 2024.

⁵¹ L Gehrke, 'Germany to Upgrade Two Ports 'Quickly' to Receive Shipped Gas' *Politico* (Berlin, 27 February 2022) <<https://www.politico.eu/article/germany-to-build-two-lng-terminals-quickly-to-reduce-energy-dependency-on-russia/>> accessed 25 March 2024.

⁵² European Commission, Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions – REPowerEU Plan COM(2022) 230 FINAL (18 May 2022) <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52022DC0230>> accessed 25 March 2024.

(Naturgy) and Italy away from Brent to TTF as an index, continuing the trend noted above.⁵³ Secondly, REPowerEU would seek to tackle the climate crisis, for example by speeding up the transition to renewables and saving energy—thus reducing demand for fossil fuels.

Although since March 2022 TTF prices had been dropping back to around the 100 EUR/MWh level, they continued to rise sharply in line with these geopolitical developments from July 2022 onwards hitting over 300 EUR/MWh in September 2022 with EU governments rushing to secure LNG supplies. Further turmoil in the TTF markets was yet to come. In early September 2022, Russia halted the supply of gas through Nord Stream 1, one of the key gas pipelines to Germany.⁵⁴ Later that month, both Nord Stream 1 and 2 showed leaks, likely the result of sabotage, and were taken out of service permanently.⁵⁵ Central European countries in particular were impacted by the lack of Russian gas supply.⁵⁶ Separately, Eastern and South Eastern European countries were already struggling with their demand for Russian gas.⁵⁷ These market developments led to the policy interventions as described in the next section and central to this article. Looking ahead at market developments in 2023, it should be noted that EU countries have continued to replace the Russian gas supply by entering into new agreements with other countries, while at the same building up the infrastructure required to do so.⁵⁸ As commentators suggest, the broader question remains one of supply and demand.⁵⁹

FINANCIAL REGULATORY INITIATIVES

New legislation

The high levels of the TTF price, volatility, and margins to be posted to CCPs for TTF derivatives caused grave concerns with policymakers in Europe. The September 2022 spike prompted a speed change in Brussels. In a letter to ESMA, the Commission set out its focal points asking for technical input.⁶⁰ In particular, the Commission asked for the functioning of circuit breakers and the need to establish price limits: should both be amended and made more uniform across the EU, in order to make price movements somewhat more balanced? Additionally, ESMA was asked to look at alternative ways for NFCs to provide collateral when clearing with EU-based CCPs, for example by extending the list of eligible collateral, to allow (central) bank guarantees as collateral, as well as reviewing the appropriateness of the (proposed) clearing threshold.⁶¹

⁵³ M Rashad and I Binnie, 'Algeria's Sonatrach Mulls New Formulas to Raise Gas Prices for European Buyers- sources' *Reuters* (London, 30 June 2022) <<https://www.reuters.com/business/energy/exclusive-algerias-sonatrach-mulls-new-formulas-raise-gas-prices-european-buyers-2022-06-29/>> accessed 25 March 2024, but also V Pop, 'EU Accelerates Talks on Lower Gas Prices from Alternative Suppliers' *Financial Times* (10 October 2022) <<https://www.ft.com/content/ae0a6891-32ec-4f94-9ef8-9f736a6509ea>> accessed 25 March 2024, and H Saleh and P Wise, 'Spain Vows to Defend Interests after Algeria Suspends Friendship Treaty' *Financial Times* (9 June 2022) <<https://www.ft.com/content/66beeb9a-8fc6-4737-8073-ac3695699973>> accessed 25 March 2024, for political context.

⁵⁴ Max Seddon and David Sheppard, 'Russia Switches off Europe's Main Gas Pipeline Until Sanctions are Lifted' *Financial Times* (5 September 2022) <<https://www.ft.com/content/2624cc0f-57b9-4142-8bc1-4141833a73dd>> accessed 25 March 2024.

⁵⁵ R Milne, D Sheppard and G Chazan, 'Denmark, Germany and Poland Warn of "sabotage" after Nord Stream leaks' *Financial Times* (28 September 2022) <<https://www.ft.com/content/85f24052-10a6-48de-8eb1-7a6f8be95759>> accessed 25 March 2024.

⁵⁶ M Fulwood, 'Europe's Infrastructure and Supply Crisis' The Oxford Institute for Energy Studies, Oxford Energy Comment (September 2022) <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2022/09/Europes-Infrastructure-and-Supply-Crisis.pdf>> accessed 25 March 2024.

⁵⁷ See eg J Bowden, 'South East Europe Gas Markets – Reconfiguring Supply Flows and Replacing Russian Gas' The Oxford Institute for Energy Studies, OIES Paper NG 177 (December 2022) <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2022/12/South-East-Europe-gas-markets-NG-177.pdf>> accessed 25 March 2024, and Z Princova, 'Challenges of Industrial Gas Demand in the Czech Republic, Poland and Slovakia' The Oxford Institute for Energy Studies, OIES Paper NG 145 (May 2019) <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/10/Challenges-of-Industrial-Gas-Demand-in-the-Czech-Republic-Poland-and-Slovakia-NG-145.pdf>> accessed 25 March 2024.

⁵⁸ See eg European Council on Foreign Relations, 'EU Energy Deals Tracker' (November 2022) <<https://ecfr.eu/special/energy-deals-tracker/>> accessed 25 March 2024, and S Kardas, 'Conscious Uncoupling: Europeans' Russian Gas Challenge in 2023' European Council on Foreign Relations – Commentary (13 February 2023) <<https://ecfr.eu/article/conscious-uncoupling-europeans-russian-gas-challenge-in-2023/>> accessed 25 March 2024.

⁵⁹ The Oxford Institute for Energy Studies, 'Quarterly Gas Review: Outlook for Gas Markets in 2023 Key signposts to look out for' (Jan 2023) <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2023/01/Quarterly-Gas-Review-Issue-20.pdf>> accessed 25 March 2024.

⁶⁰ European Commission, 'Letter to ESMA: Response to the Current Level of Margins and of Excessive Volatility in Energy Derivatives Markets' (13 September 2022) <https://www.esma.europa.eu/sites/default/files/library/jb-letter_to_esma_-_energy_derivatives.pdf> accessed 25 March 2024.

⁶¹ *ibid* 2–3.

In its technical advice, ESMA noted that the cause of the market developments appears to stem from ‘the geopolitical situation and the associated spot market movements’.⁶² ESMA therefore stressed its concern of transferring risks from the energy sector into the financial sector, warning that the financial regulatory framework designed in the wake of the Global Financial Crisis of 2008, as set out previously, should not be compromised. However, noting that during the summer of 2022, the number of times trading was halted has been low, ESMA considered it useful to ‘implementing, on a temporary basis and for energy derivative markets only, a new type of trading halt mechanism’ as part of emergency measures tackling the energy crisis.⁶³ ESMA expressed caution in amending margin requirements, as this could transfer risk towards CCPs and its members. ESMA was therefore hesitant to extend the type of collateral allowed, for example towards (uncollateralized) bank guarantees, without strict conditions—and has amended the relevant texts only temporarily.⁶⁴ In other words, while fully appreciating the real-world economic situation and the call for action, legislative proposals should not be detrimental to financial stability nor should it have unintended consequences (or even the adverse effect) due to the way financial markets operate.

The political process in Brussels appears to have been difficult. As announced by President Ms. von der Leyen and proposed by the Council on 14 September 2022, a series of emergency interventions was drafted to address high energy prices.⁶⁵ The proposal included numerous steps, including demand reduction, diversification away from Russian fossil fuels, investment in renewables, liquidity support for energy companies where needed, as well as a cap on revenues and unexpected profits for energy and fossil fuel companies. These were adopted in October 2022.⁶⁶ Whilst this package might justifiably be considered far reaching, it did not include a cap on the wholesale market price for gas, despite a large number of Member States pushing for it.⁶⁷ In their joint letter, it is stated that such a cap would help ‘every member state to mitigate the inflationary pressure, manage expectations and provide a framework in case of potential supply disruptions, and limit the extra profits in the sector’.⁶⁸ It might be useful to recall that many of these Member States by now had long-term gas contracts indexed against the TTF price: a cap would thus place an upper limit on their costs of energy supply. Other Member States, such as Germany, argued that any cap unilaterally imposed by the EU would risk (short-term) energy supplies needed to replace Russian gas. In particular, it could result in LNG shipments going elsewhere for a higher price than the EU could offer, including to China once its economy would recover. As a consequence, some policymakers have levied accusations of individualistic behaviour towards those Member States resisting a cap.⁶⁹

⁶² ESMA, ‘Letter to the European Commission: Ref: Response Regarding the Current Level of Margins and of Excessive Volatility in Energy Derivatives Markets’ (22 September 2022) <https://www.esma.europa.eu/sites/default/files/library/esma24-436-1414_-_response_to_ec_commodity_markets.pdf> accessed 25 March 2024.

⁶³ *ibid.* 2.

⁶⁴ ESMA, ‘Final Report - Emergency Measures on Collateral Requirements – Draft Regulatory Technical Standards amending Commission Delegated Regulation (RTS) 153/2013’ (14 October 2022) <https://www.esma.europa.eu/sites/default/files/library/esma91-372-2466_report_amended_rts_emergency_measures_on_collateral_requirements_article_463_emir.pdf> accessed 25 March 2024.

⁶⁵ European Commission, ‘Statement by President von der Leyen on Energy’ (7 September 2022) <https://ec.europa.eu/commission/presscorner/detail/en/speech_22_5389> accessed 25 March 2024; European Commission, ‘Proposal for a Council Regulation on an Emergency Intervention to Address High Energy Prices’ (14 September 2022) COM(2022) 473 FINAL <https://energy.ec.europa.eu/system/files/2022-09/COM_2022_473_1_EN_ACT_part1_v7.pdf> accessed 25 March 2024; European Commission, ‘Energy Prices: Commission Proposes Emergency Market Intervention to Reduce Bills for Europeans’ Press Release (14 September 2022) <https://ec.europa.eu/commission/presscorner/detail/en/IP_22_5489> accessed 25 March 2024.

⁶⁶ Council Regulation (EU) 2022/1854 of 6 October 2022 on an emergency intervention to address high energy prices OJ L1 261/1 <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32022R1854>> accessed 25 March 2024.

⁶⁷ ‘Joint letter of the Ministers of Energy to Commissioner Simson’ (September 2022) <<https://www.euractiv.com/wp-content/uploads/sites/2/2022/09/mc-joint-letter.pdf>> accessed 25 March 2024; ‘Group of countries push EU for gas price cap -letter’ *Reuters* (Brussels 27 September 2022) <<https://www.reuters.com/business/energy/group-countries-push-eu-gas-price-cap-letter-2022-09-27/>> accessed 25 March 2024; J Liboreiro and E Koutsokosta, ‘Energy Crisis: 15 Countries Call for EU-wide Price Cap on all Gas Imports’ *EuroNews* (27 September 2022) <<https://www.euronews.com/my-europe/2022/09/27/energy-crisis-15-countries-call-for-eu-wide-price-cap-on-all-gas-imports>> accessed 25 March 2024.

⁶⁸ *ibid.*

⁶⁹ A Kritikos, ‘The European Union’s Uneasy Journey through the Energy Crisis’, Hellenic Foundation for European & Foreign Policy, Policy Paper 112/2022 (October 2022) <<https://www.eliampe.gr/wp-content/uploads/2022/10/Policy-paper-112-Kritikos-EN-final.pdf>> accessed 25 March 2024.

What followed, therefore, were fraught negotiations over the shape and level of any potential cap on the wholesale market price of gas.⁷⁰ On 22 November 2022, the Commission proposed the Market Correction Mechanism (MCM), or put simply, a dynamic price cap on TTF, complementing earlier measures.⁷¹ These proposals became subject to negotiations in a series of Energy Council meetings.⁷² On 19 December 2022, the final text was agreed ('MCM Regulation').⁷³ Note that on the same day, various other measures were agreed, including an intraday volatility management mechanism (IVMM, effectively additional circuit breakers on TTF), the coordination of gas purchases and a framework to accelerate the deployment of renewable energy ('IVMM Regulation').⁷⁴ The next subsections will discuss two of the measures introduced: the IVMM and the MCM.

Circuit breakers

Before discussing the IVMM specifically, it is perhaps helpful to set out briefly the existing regulations on circuit breakers. An RM operates under specific constraints and regulations, provided for amongst others within MiFID II, as set out previously. For example, Article 47 MiFID II provides organizational requirements, including adequate management of risks, rules providing for fair and orderly trading, and sufficient resources to guarantee its orderly functioning. Article 48 MiFID II sets out how a trading system must be sufficiently resilient including requirements for circuit breakers. A circuit breaker is a mechanism in accordance with Article 48(5) to temporarily halt or constrain trading if there is a significant price movement in the financial instrument concerned. ESMA has issued Guidelines where a venue allows or enables algorithmic trading on their systems.⁷⁵ These Guidelines are fairly generic, but nonetheless give clear elements to take into account for calibration of the circuit breakers. These include, for example, the nature of the instruments, its quotation levels and liquidity- and volatility profile, and trading venue mode and rules.

Generally speaking, the use and effectiveness of circuit breakers are certainly not undisputed amongst academics.⁷⁶ Put simply, those in favour argue it gives market participants time to reflect and calm markets, thus reducing volatility, while opponents argue it hinders the price discovery process. Research by ESMA suggests that volatility is reduced after activation without impairing

⁷⁰ See, eg: C Cooper, J Cienski and B Moens, 'Commission Pledges to move on Gas Price Cap Proposal' (11 November 2022) *Politico* <<https://www.politico.eu/article/commission-pledges-to-move-on-gas-price-cap-proposal/>> accessed 25 March 2024; K Abnett, 'EU Struggles to Agree Gas Price Cap, Considers 220-euro Limit' *Reuters* (Brussels, 6 December 2022) <<https://www.reuters.com/business/energy/eu-struggles-agree-gas-price-cap-considers-220-euro-limit-2022-12-06/>> accessed 25 March 2024.

⁷¹ European Commission, Proposal for a Council Regulation Establishing a market correction mechanism to protect citizens and the economy against excessively high prices (22 November 2022) COM(2022) 668 FINAL <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52022PC0668&from=EN>> accessed 25 March 2024; European Commission, 'Commission Proposes a New EU Instrument to Limit Excessive Gas Price Spikes' Press Release (22 November 2022) <https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7065> accessed 25 March 2024.

⁷² See eg: Council for the European Union, 'Extraordinary TTE Energy Council, Brussels, 13 December 2022' Background brief (12 December 2022) <<https://www.consilium.europa.eu/media/60743/background-brief-energy-13122022.pdf>> accessed 25 March 2024; and Council for the European Union, 'Extraordinary Transport, Telecommunications and Energy Council (Energy), 13 December 2022 – Main Results' (13 December 2023) <<https://www.consilium.europa.eu/en/meetings/tte/2022/12/13/>> accessed 25 March 2024.

⁷³ Council Regulation (EU) 2022/2578 of 22 December 2022 establishing a market correction mechanism to protect Union citizens and the economy against excessively high prices OJ L335/45 <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32022R2578&qid=1684665235556>> accessed 25 March 2024.

⁷⁴ Council Regulation (EU) 2022/2576 of 19 December enhancing solidarity through better coordination of gas purchases, reliable price benchmarks and exchanges of gas across borders OJ L335/1 <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32022R2576>> accessed 25 March 2024; and Council for the European Union, 'Extraordinary Transport, Telecommunications and Energy Council (Energy), 19 December 2022 – Main Results' (19 Dec 2023) <https://www.consilium.europa.eu/en/meetings/tte/2022/12/19/?utm_source=twitter.com&utm_medium=social&utm_campaign=20221219-TTE&utm_content=video> accessed 25 March 2024.

⁷⁵ ESMA, 'Guidelines: Calibration of Circuit Breakers and Publication of Trading Halts under MiFID II' (6 April 2017) <https://www.esma.europa.eu/sites/default/files/library/esma70-872942901-63_mifid_ii_guidelines_on_trading_halts.pdf> accessed 25 March 2024.

⁷⁶ See eg: IM Sifat and A Mohamad, 'Circuit Breakers as Market Stability Levers: A Survey of Research, Praxis, and Challenges, International' (2018) *Journal of Finance & Economics* <<https://doi.org/10.1002/jife.1709>> accessed 25 March 2024; D Abad and R Pascual, 'Holding Back Volatility: Circuit Breakers, Price Limits, and Trading Halts', in H Kent Baker and H Kiyamaz (eds), *Market Microstructure in Emerging and Developed Markets: Price Discovery, Information Flows, and Transaction Costs* (Wiley 2013) <<https://doi.org/10.1002/9781118681145.ch17>> accessed 25 March 2024; A Subrahmanyam, 'Circuit Breakers and Market Volatility: A Theoretical Perspective' (1994) *Journal of Finance* <<https://doi.org/10.1111/j.1540-6261.1994.tb04427.x>> accessed 25 March 2024.

the price discovery process, but trading in cross-listed products on ‘satellite-venues’ dries up completely.⁷⁷ In summary, the debate on the usage and impact of circuit breakers is by no means settled.

The fact that the price movements in August and September 2022 may not have triggered as many circuit breakers as some may have wanted has caught policymakers’ attention.⁷⁸ Some raised the question: if this scenario did not trigger circuit breakers more frequently, which scenario would? Articles 15–17 of the IVMM Regulation therefore introduce the ‘temporary intra-day volatility management mechanism in energy derivatives markets’ (or circuit breakers) in order to reduce volatility and to try and limit large price movements. In accordance with Article 15, the price should remain within a price corridor, the boundaries of which should be set in relation to a recent reference price and may need to be updated even intraday. Implementation was required as per 31 January 2023. Article 16 states the national regulators are responsible for the implementation, while ESMA shall have a coordinating role under Article 17. The proposal recognizes that, as explained above, such mechanisms should be tailored to the specific circumstances of the trading venue and the products. It is therefore up to the trading venue and the corresponding national supervisor to implement the new mechanisms. ESMA has a coordinating role in this and is required to report on any divergences, but pointedly without a specific need to harmonize across the range of different venues and products. This approach would facilitate the different needs across different venues and different products.

Market correction mechanism

According to Preamble (12), the MCM Regulation introduced ‘a temporary market correction mechanism (the ‘MCM’) for natural gas transactions in the main markets for TTF derivatives and derivatives linked to other VTPs with maturities between month-ahead and year-ahead, as an instrument against episodes of excessively high gas prices with immediate effect’. The MCM is temporary as the MCM Regulation entered into force on 1 February 2023 for the period of one year as per Article 12(1). The MCM must meet two basic objectives, according to Preamble (15): it must be effective against extraordinary high gas prices, and it must be activated if these prices are high compared to world levels. Moreover, recognizing the various concerns raised by some Member States, Preamble (14) lists a number of safeguards. These include, amongst others, that it should not jeopardize gas supply to the EU, result in an increase in gas consumption, or affect the stability and orderly functioning of energy derivative markets. Note that, as per Article 1, the MCM operates on the TTF derivative market and products, and not on the spot market.

The MCM on the front-year TTF is activated as per Article 4(1) in the event the front-month TTF both exceeds the level of EUR 180/MWh for three working days and is EUR 35 higher than a pre-specified reference price. This reference price reflects the world-level gas price, comprised of, amongst others, North Western Europe (NEW), Mediterranean (MED), NBP, and Asian markers as per Article 2(6). These must be published daily by ACER under Article 3(4). Once the MCM is activated, the price of TTF products in scope is capped to the maximum of EUR 180/MWh and the reference price plus EUR 35/MWh, that is the price cap is dynamic and follows the reference price. The MCM should be deactivated again after 20 days from the event or later, once the reference price has been below EUR 145/MWh for three consecutive days as per Article 4(7). There are other circumstances under which the MCM might be deactivated (or suspended) as listed under Article 6, for example when there is an emergency declared in the gas supply within the EU or one of its regions. Other circumstances include unintended market disturbances and risks to financial stability. Note that the scope of TTF contracts is limited by Article 12(4), most notably by excluding TTF contracts hedging

⁷⁷ ESMA, ‘Market impacts of circuit breakers – Evidence from EU trading venues’, ESMA Working Paper No 1 2020 (January 2020) <https://www.esma.europa.eu/sites/default/files/library/esmawp-2020-1_market_impacts_of_circuit_breakers.pdf> accessed 25 March 2024.

⁷⁸ IVMM Regulation, in particular preamble (42)–(45).

contracts in existence before 1 February 2023, and TTF contracts which are part of a CCP default management procedure.

Implementation

Trading venues on which energy-related commodity derivatives are traded were required to have implemented the IVMM by 31 January 2023. ESMA has already carried out an assessment and published a final report on said implementation as per Article 17 of the IVMM Regulation.⁷⁹ The main conclusions of the report are that, while the IVMM has been implemented, it appears that it does not contribute to a reduction in intraday volatility beyond what the MiFID II circuit breakers already delivered on their own. Moreover, for smaller venues, the implementation of the IVMM appears cumbersome as they are dependent on the reference price feed from larger and more liquid venues, as well as having associated difficulties in determining meaningful levels for activation. Perhaps the most beneficial result is that larger venues have been forced to review their circuit breaker calibration critically.

The MCM was implemented by both ICE Endex and EEX on which TTF products are traded. EEX has amended its rulebook by prohibiting members of their exchange to place orders which would be in breach of the MCM Regulation. Additionally, EEX has enabled trading of TTF products on their Ordinary Trading Facility (OTF), which falls outside the scope of the MCM Regulation. This would give market participants an alternative venue to trade TTF products should the activation of the MCM result in disorderly trading on the EEX RM.⁸⁰ ICE Endex has taken a similar approach. The implementation of the MCM Regulation is done by way of the rulebook.⁸¹ And similar to EEX, ICE has created an alternative for trading TTF products should trading become disorderly, in this case on ICE Futures Europe, an RM in London and thus outside of the EU and the scope of the MCM Regulation.

EVALUATION

The MCM has been subject to review by both ACER and ESMA as mandated under Article 8 of the MCM Regulation. The objective is to review the market impact of the introduction of the MCM. On 23 January 2023, both ACER⁸² and ESMA⁸³ submitted their preliminary data report. ACER first observes that no positive or negative impacts on the energy markets could be identified and attributed to the MCM since its introduction.⁸⁴ ACER notes that the introduction of the MCM has coincided with lower prices, certainly when compared with August and September 2022; however, it is observed that these lower prices are not a direct or indirect consequence of the introduction of the MCM.⁸⁵ Instead, ACER notes as reasons for the fallen price levels: a reduction in demand due to previously high price levels by energy-intensive industries; efficiency measures; a relatively high storage filling levels compared to previous years; a mild winter; increase in energy from renewables and recovery from nuclear; and robust gas supply due to LNG

⁷⁹ ESMA, 'Final Report on the Implementation and Functioning of the Intra-day Volatility Management Mechanism' (30 June 2023) <https://www.esma.europa.eu/sites/default/files/2023-06/ESMA70-156-6509_Final_Report_Intra-day_Volatility_Management_Mechanism.pdf> accessed 25 March 2024.

⁸⁰ Note that trading of physically settled wholesale energy products on an OTF would be subject to the C6 REMIT carve out, meaning that they are not regarded as financial instruments under MiFID II. See ESMA, 'Report MIFID II: C6 energy derivative contracts and the EMIR requirements' (29 January 2020) <https://www.esma.europa.eu/sites/default/files/library/esma70-151-2908_mifid_ii_report_c6_energy_derivatives.pdf> accessed 25 March 2024.

⁸¹ ICE, 'MCM Regulation Guidance' (14 April 2023) <https://www.theice.com/publicdocs/endex/circulars/E23017_attach_2.pdf> accessed 25 March 2024.

⁸² ACER, 'Market Correction Mechanism: Preliminary data report' (23 January 2023) <https://acer.europa.eu/Publications/ACER_PreliminaryReport_MCM.pdf> accessed 25 March 2024.

⁸³ ESMA, 'Preliminary Data Report on the Introduction of the Market Correction Mechanism' (23 January 2023) <https://www.esma.europa.eu/sites/default/files/library/esma70-446-775_preliminary_data_report_on_mcm.pdf> accessed 25 March 2024; ESMA, 'Letter to European Commission on Preliminary Report' (23 January 2023) <https://www.esma.europa.eu/sites/default/files/library/esma70-446-779_mcm_preliminary_report_letter_to_the_ec.pdf> accessed 25 March 2024.

⁸⁴ ACER (n 82) 10–12.

⁸⁵ *ibid* 5.

imports.⁸⁶ Moreover, ACER notes that global competition for LNG remained limited due to low economic growth in China. In other words, no upsides are noted.

Where the focus of the ACER preliminary report is primarily on the spot market, covering for its regulatory perimeter of REMIT, the ESMA preliminary report examines the derivatives market. ESMA notes that on activation of the MCM, market participants may seek to adapt to the new environment by ‘exploring other ways of achieving the objectives that they currently fulfil by trading TTF derivatives on EU regulated markets without being bound by the price limit’.⁸⁷ Examples thereof include: trading OTC, trading on a non-EU venue; or trading on an EU venue other than an RM—none of which are within scope of the MCM Regulation, as observed above.⁸⁸ Examining the immediate impact of the MCM, while referring to the ACER report for price levels, ESMA notes that neither the volumes in trading activity nor the level of open interest appears to be significantly affected.⁸⁹ As regards a shift from ETD towards OTC trading, it is observed that since the rising prices over the summer, there already has been a significant shift towards OTC trading in order to avoid the posting of clearing margins that rose to high levels in view of the spike in the TTF index.⁹⁰ If activation of the MCM would result in an additional shift towards OTC, then this would likely result in increased risks in the financial system.⁹¹ Moreover, ESMA notes that activation of the MCM is likely to result in trading moving not only OTC, but also to non-EU venues or towards an EU OTF, or market participants may even decide to no longer hedge their risks at all.⁹² This would significantly increase their exposure to price movements and consequently, an enhanced impact on the real economy and distortion of prices for the end-users.

The ESMA preliminary report also examines the impact on CCPs and clearing. If activation of the MCM would lead to increased OTC trading, this would likely result in the watering down of reliable price information as public market price discovery would be based on relatively thin markets. This would hamper the calculation of margins as well as the default management process in case of the default of a clearing member.⁹³ Moreover, under EMIR RTS Article 47(5) a CCP is required to address pricing limitations, for example unavailability of prices from a liquid and transparent trading venue, by adopting more conservative margin determination.⁹⁴ Moreover, it raises the question whether positions in TTF without MCM could be offset by positions in TTF with MCM.⁹⁵ Finally, in case of the default of a clearing member, unwinding its position is difficult due to the constraints placed by the MCM on the chain of onwards selling and hedging of said positions.⁹⁶ All of these issues would be detrimental to the proper running and risk management of a CCP, adding to financial instability.

The final reports submitted by ACER⁹⁷ and ESMA⁹⁸ affirm the findings as set out above. ACER additionally describes the implications extending the MCM to include VTPs other than TTF, which, despite the intention to create a level playing field, it sees largely as an administrative burden on the other venues without much impact due to the major differences in volumes traded.⁹⁹ ACER also highlights some general risks, including price-, flow-, and trading

⁸⁶ *ibid* 5.

⁸⁷ ESMA (n 83) 10–11.

⁸⁸ *ibid* 11.

⁸⁹ *ibid* 13–18.

⁹⁰ *ibid* 20–21.

⁹¹ *ibid* 22.

⁹² *ibid* 24–27.

⁹³ *ibid* 29.

⁹⁴ *ibid* 30.

⁹⁵ *ibid* 30.

⁹⁶ *ibid* 31.

⁹⁷ ACER, ‘Market Correction Mechanism: Effects Assessment Report’ (1 March 2023) <https://acer.europa.eu/Publications/ACER_FinalReport_MCM.pdf> accessed 25 March 2024.

⁹⁸ ESMA, ‘Effects Assessment of the Impact of the Market Correction Mechanism on Financial Markets’ (1 March 2023) <https://www.esma.europa.eu/sites/default/files/library/ESMA70-446-794_MCM_Effects_Assessment_Report.pdf> accessed 25 March 2024; ESMA, ‘ESMA Finds that MCM had no Measurable Impact on Financial Markets under Current Market Conditions’, Press Release (1 March 2023) <<https://www.esma.europa.eu/press-news/esma-news/esma-finds-mcm-had-no-measurable-impact-financial-markets-under-current-market>> accessed 25 March 2024.

⁹⁹ ACER (n 97) para 3.

developments.¹⁰⁰ Interestingly, ESMA added specific elements from the MCM Regulation for clarification.¹⁰¹ Having been drafted in a relatively short timeframe and the result of political compromise, it appears the MCM Regulation lacks clarity on certain elements: ESMA raises questions for example on how the exemption of the MCM on new trades hedging trades concluded prior to February 2023 would work in practice. Moreover, the scope of the MCM is not always clear: for example, are block trades included in the scope or not, and what precisely is the meaning of front-year. Such unclarity is likely to contribute to the disorderly functioning of the TTF market upon activation of the MCM. ESMA further notes that it is unclear how a default management process at the CCP would work in practice: while the CCP can organize an auction, and while auction participants are exempted from the MCM, they cannot hedge their risks in relation to any purchased (or 'ported') portfolio as this would not be exempt.¹⁰² This would make the unwinding of a defaulting clearing member very problematic, which in turn makes the risk management of the CCP problematic creating financial instability.

The European Central Bank (ECB) has been attributed a far more limited role in these evaluations, in line with their wishes as expressed in their opinion on the MCM proposals at the time.¹⁰³ In its opinion dated 2 December 2022, however, the ECB does express its concern that the MCM 'may, in some circumstances, jeopardise financial stability in the euro area' and 'may increase volatility and related margin calls, challenge central counterparties' ability to manage financial risks, and may also incentivize migration from trading venues to the non-centrally cleared over-the-counter (OTC) market'.¹⁰⁴ This is very much in line with both the preliminary and final ESMA report. Moreover, the ECB provides an insight into its views on the price development in global gas market for 2023, setting out specifically the impacts of different supply and demand scenarios.¹⁰⁵

The analysis by European institutions as presented above is supported by various academic reports. The Oxford Institute for Energy Studies (OIES) notes several weaknesses with introducing an MCM.¹⁰⁶ First, the MCM does not address the underlying process of supply and demand which causes the price moves in the first place. To the contrary, it is argued that the MCM is likely to accelerate the underlying supply and demand problems. Secondly, the OIES notes it is likely that the MCM will favour the inefficient or large users in a disproportionate way, rather than encouraging them to reduce their demand. Thirdly, the OIES argues it is difficult to set the level of the MCM considering global competition, where LNG in the EU is priced of TTF. It is suggested the price corridor with a reference basket is of limited use to resolve this: one could still relatively easily outbid the EU purchasers. Other issues noted are in line with those discussed already, including a move towards OTC trading, a lack of transparent price formation, and the need to reduce demand.

More academics are outspoken against the MCM: Thomas argues that a cap on TTF may aggrive the EU's allies, including the USA and Norway, as a consequence of the MCM unilaterally lowering the price.¹⁰⁷ Moreover, it may risk other suppliers sending the LNG elsewhere if those

¹⁰⁰ *ibid* para 5.

¹⁰¹ ESMA, 'Annex II – points for Clarification' (23 January 2023) <https://www.esma.europa.eu/sites/default/files/library/esma70-46-778_annex_ii_-_points_for_clarification.pdf> accessed 25 March 2024.

¹⁰² *ibid* 2–3.

¹⁰³ European Central Bank (ECB), 'Opinion of the European Central Bank of 2 December 2022 on a proposal for a Council regulation establishing a market correction mechanism to protect citizens and the economy against excessively high prices' (CON/2022/44) <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52022AB0044>> accessed 25 March 2024.

¹⁰⁴ *ibid* 2.

¹⁰⁵ JF Adolfsen, MS Lappe and AS Manu, 'Global Risks to the EU Natural Gas Market', ECB Economic Bulletin Issue 1/2023 (2023) <https://www.ecb.europa.eu/pub/economic-bulletin/focus/2023/html/ecb.ebbbox202301_01~6395aa7fc0.en.html> accessed 25 March 2024.

¹⁰⁶ A Barnes, 'EU Commission Proposal for Joint Gas Purchasing, Price Caps and Collective Allocation of Gas: An Assessment', OIES Paper NG 176 (December 2022) <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2022/12/EU-Commission-proposal-for-joint-gas-purchasing-price-caps-and-collective-allocation-of-gas-an-assessment-NG-176.pdf>> accessed 25 March 2024; see also: M Fulwood, 'The Consequences of Capping TTF', Oxford Energy Comment (October 2022) <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2022/10/The-Consequences-of-Capping-the-TTF-Price.pdf>> accessed 25 March 2024.

¹⁰⁷ S Thomas, 'European Commission Response to the Energy Crisis of 2022' PSIRU, University of Greenwich Working Paper (October 2022) <https://gala.gre.ac.uk/id/eprint/37893/7/37893_THOMAS_European_Commission_response_to_the_energy_crisis_of_2022.pdf> accessed 25 March 2024 at 10.

prices are more competitive—an argument mentioned a few times already. Not all academics are equivocally negative: researchers from the European University Institute (EUI) have examined how a cap could be introduced if the political decision was made to implement one.¹⁰⁸ Recognizing the global competition for gas, in particular LNG, they designed a strategy split into pipeline gas and LNG gas with a pricing cap mechanism on the former only. While it is beyond the scope of this article to discuss the merits of this proposal in depth, as the MCM Regulation has followed a different approach, it shows some reservation or restraint in how a cap could meaningfully be applied.

Besides the regulatory and academic views, it is worth noting some of the warnings from the relevant market participants. Although it is fair to suggest they have a commercial interest in this debate, which in itself cannot be sufficient reason to dismiss their observations outright. Concerns have been raised about the addition of the IVMM, arguing that circuit breakers already are required under MiFID II Article 48(5) as highlighted previously, and if not calibrated carefully they may in fact add to volatility.¹⁰⁹ Market participants have also suggested significant additional margins will be demanded from the moment the MCM Regulation would enter into force.¹¹⁰ One of the reasons is that, depending on the ultimate shape and implementation of the MCM Regulation, two sorts of TTF contracts might exist: those with and those without a cap, which may behave differently and not constitute a hedge for each other. Alternatively, trading may move OTC making price formation less transparent. Either way, the CCP margin models would have to be amended accordingly, raising the prospects of increased margins—although the exact amount is difficult to verify.

CONCLUSION

This article has sought to provide a financial markets perspective on the developments in the European gas market, the recent turmoil, and in particular the policy interventions which followed. As it happens, TTF prices have dropped dramatically since the introduction of said interventions to below 30 EUR/MWh in May 2023.¹¹¹ It was expected that the EU demand for gas would reduce, for example due to the agreement to reduce the consumption by 15 per cent voluntarily, as well as the mild winter of 2022.¹¹² Gas storage consequently remains high.¹¹³ Nonetheless, the level of gas prices remain a matter of supply and demand alone, and both supply and demand have been shifting considerably over the past year or two.

There is no evidence to attribute the low price levels to the introduction of the MCM or the IVMM, of which this article has been critical. To the contrary, European Agencies state explicitly that it is attributable to supply and demand instead.¹¹⁴ While appreciating the urgency and gravity due to the role of the TTF index for example as reference price in long-term gas supply contracts and real-world economic implications, the introduction of the MCM in particular raises serious concerns as regards the functioning and attractiveness of the CMU. These concerns include: (i) the increased risks of TTF trading moving to a third country, in particular the UK; (ii) the increased risks with trading moving OTC instead of on an RM; (iii) whether TTF markets can operate in a fair and orderly way upon activation of the MCM; and (iv) increased risks to financial

¹⁰⁸ I Conti, 'A Price Cap on EU Gas Markets?' EUI Florence School of Regulation (18 October 2022) <<https://fsr.eui.eu/a-price-cap-on-eu-gas-markets/>> and A Pototschnig and I Conti, 'Capping the European Price of Gas' EUI Florence School of Regulation Policy Brief (14 September 2022) <<https://fsr.eui.eu/publications/?handle=1814/74868>> accessed 25 March 2024.

¹⁰⁹ R Tunstead, 'EC Circuit Breaker Plan for Energy Futures under Fire: Market Participants Say Proposals could Instead Lead to more Volatility in Front-month Contracts' (24 October 2022) *RISK Magazine* <<https://www.risk.net/derivatives/7954924/ec-circuit-breaker-plan-for-energy-futures-under-fire>> accessed 25 March 2024.

¹¹⁰ P Stafford, S Fleming and A Hancock, 'EU Gas Price Cap Would Deliver \$33bn Blow to Market, says ICE' *Financial Times* (23 November 2022) <<https://www.ft.com/content/58da50d1-c2db-4ab9-a251-9e6827542287>> accessed 25 March 2024.

¹¹¹ S Tani and D Sheppard, 'European Gas Prices Back in Normal Range for First Time Since Energy Crisis' *Financial Times* (18 May 2023) <<https://www.ft.com/content/ba8f7a30-954b-4620-b8f1-40de771e77fb>> accessed 25 March 2024.

¹¹² A Hancock, 'EU Gas Demand Expected to Fall by more than Russian Imports in 2023' *Financial Times* (25 May 2023) <<https://www.ft.com/content/1fa46ca8-524a-49ad-9b94-e52f4dbce698>> accessed 25 March 2024.

¹¹³ S Tani and N Fildes, 'EU Hits Gas Storage Target before November Deadline' *Financial Times* (18 August 2023) <<https://www.ft.com/content/e5c3ebd4-0758-4bd3-802c-8a5a82f58034>> accessed 25 March 2024.

¹¹⁴ ACER (n 82) 5 and ESMA (n 83) 12.

stability in particular in relation to clearing. All of these concerns, as discussed in this article, are also identified by ACER and ESMA in their respective reviews of these policies. It is therefore remarkable that the MCM has recently been extended for another year, applying until 31 January 2025.¹¹⁵

Perversely, TTF trading moving to a third country would negate much of the other financial risks associated with the MCM. It is regrettable that one would almost have to encourage such a move from a financial stability perspective as it is contrary to improving the attractiveness of the CMU. Moreover, it is contrary to the notion of ‘strategic autonomy’, the capacity of the EU to act autonomously.¹¹⁶ Trading in the EU’s most important energy price index would then reside outside its Single Market and thus outside its jurisdiction. As said before, the TTF price is a matter of supply and demand, and REPowerEU correctly identifies the reduction of demand by moving to cleaner energy sources. The direction of travel should thus be in accordance with the European Green Deal, the Action Plan for Sustainable Growth, and other measures aimed at fundamentally reshaping the energy supply side.

¹¹⁵ Council Regulation (EU) 2023/2920 of 21 December 2023 amending Regulation (EU) 2022/2578 as regards the prolongation of its period of application <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202302920> accessed 25 March 2024.

¹¹⁶ European Commission, ‘Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee for the Regions – The European economic and financial system: fostering openness, strength and resilience’ COM(2021) 32 Final (Brussel, 19 January 2021) <<https://data.consilium.europa.eu/doc/document/ST-5487-2021-INIT/en/pdf>> accessed 25 March 2024.

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