



large multinational energy companies, and trading houses operating in the energy markets. Targeted entities are particularly frustrated by the need to report the same information to different regulators in different formats.

Smaller companies who really only want to use the markets for hedging purposes are likely to be driven away by the reporting requirements alone. That may be no bad thing, judging by the number of such companies who end up in court complaining that they had only authorized hedging and did not appreciate that their traders had

gone to the dark side and started making speculative punts.

Small-scale hedgers may be regarded as collateral damage in the war against market abuse and systemic risk, but anything that reduces liquidity increases costs by widening bid-offer spreads.

The heavier regulatory hand we are now seeing must therefore achieve its objectives to have any chance of justifying the cost.

ESMA currently has a perfect opportunity to demonstrate the value of the regulatory effort.

As large trading companies such as Glencore struggle publicly with the consequences of low commodity prices, it would be reassuring to have a regulator confirm or deny fears that we are looking over another precipice of systemic risk, this time involving the big private trading houses. It would go a long way to silencing the critics if ESMA were able to either confirm or scotch persistent rumours that have been circulating for months that we are about to see another Lehman Brothers in the commodities market. Don't hold your breath!



## Financial regulation in the energy sector: jumping the gun

Marco Kerste and Bert Tieben

The inclusion of energy OTC derivative trading in EMIR (European Market Infrastructure Regulation) strongly builds on the assumption that the sector poses risk of contagion towards the real economy. This hypothesis of systemic risk was not well tested as part of the regulatory preparation. We find that empirical evidence does not support the hypothesis, questioning the necessity of financial regulation in the energy sector.

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When assessing the net benefits of regulation, it would be easy to take the intended contribution as a given starting point in terms of positive impact. Alas, in our experience this constitutes a typical example of 'jumping the gun', as the intended contribution of regulation is not always rigorously tested upfront. Where we expect that other contributors in this issue will focus on the impact of EMIR on energy commodity trading *after*

the implementation, we focus on the question of whether it was necessary to include energy OTC derivative trading as part of the scope of EMIR in the first place.

### OTC trading and perception of systemic risk – role of regulation

Let us first look at the intentions of EMIR: it aims to curtail systemic risk from over-the-counter (OTC) trading by introducing a set of legally binding rules to improve the transparency of OTC trading and diminish counterparty risk. This latter task is achieved by making central clearing an obligation. This obligation also extends to non-financial counterparties (NFCs), depending on the type of OTC contracts and the notional value of the contracts.

With EMIR, the scope of financial regulation is thus expanded towards non-financial sectors, assuming systemic risk can be channelled from non-financial sectors to the financial sector through the use of derivatives. Although the credit crisis indeed points at serious risks in OTC derivatives

trading, the actual extent to which non-financial companies contribute to systemic risk has hardly been the subject of research. Policy discussions on EMIR have generally focused on regulation design and the necessity of practical rules. This does not mean that it is illogical to assume that non-financial sectors contribute to systemic risk via the use of OTC derivatives.

In their 2011 paper 'Regulating Systemic Risk: Towards an Analytical Framework' (*Notre Dame Law Review*, 86:4, page 1351) Anabtawi and Schwarcz define systemic risk as 'the risk that a localized adverse shock, such as the collapse of a firm or market, will have repercussions that negatively impact the broader economy'. The function of banks as financial intermediaries – being a condition *sine qua non* for funding the consumption and investments of many economic participants – implies a close relationship with the real economy. In other words: a disruption of this function has a direct impact on activities in the real economy. This puts financial institutions at the centre of the

systemic risk discussion. But that is not the whole picture.

In identifying systemically important markets, institutions such as the International Monetary Fund (IMF), the Financial Stability Board (FSB), and the Bank for International Settlements (BIS) point primarily to size, substitutability, and interconnectedness. And it is because of meeting at least the first and last of these three criteria, in combination with the counterparty risk involved, that OTC derivative markets are often considered to be an important component of systemic risk. This explains why regulations, such as EMIR, relating to financial markets and specifically focusing on the role of derivatives in financial trading, are introduced. And, as a direct consequence, non-financial sectors are also brought under the potential scope of financial regulation, given that commodity products such as energy are the subject of OTC contracts.

#### **EMIR's intended role in targeting systemic risk**

EMIR explicitly focuses the clearing obligation on the curtailment of systemic risk. However, there is very little factual evidence that the clearing obligation will actually achieve this objective, or that it will do this in a cost-efficient manner. The draft regulation for EMIR included an impact assessment of different options to curtail systemic risk. The Impact Assessment by the European Commission in 2010 initially referred to counterparty credit risk and operational risk as such, but the regulation clearly isolates the reduction of systemic risk as the prime target. However, what exactly constitutes systemic risk is left open. It is therefore

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striking that the impact assessment is purely policy driven: the clearing obligation is preferred because, by definition, it reduces counterparty risk for OTC contracts on an individual level. But this does not mean that systemic risk at a market level is also tackled. At a certain point in the draft-making process the phrase 'systemic risk' was simply substituted for 'counterparty credit risk', which underlines that there was hardly any analysis of the nature of the problem that EMIR aims to solve. Nor was this achieved by the impact assessment executed as part of the regulatory process following the official publication of EMIR. This cost-benefit analysis still ignored the nature of systemic risk as a phenomenon pertaining to the level of derivative markets as a whole, merely isolating costs and benefits that can be attributed to specific details of the regulation.

As such, there is no overall assessment of the costs and benefits of EMIR, in terms of the reduction of systemic risk that it generates as an economic benefit, balanced against its economic costs. More generally, the European Securities and Markets Authority (ESMA) continues to use systemic risk as the main target for which EMIR is considered to provide the solution, without sound evidence of the problem as such, nor of its magnitude and the best ways to tackle it.

#### **Do non-financial sectors contribute to systemic risk?**

As the proof of the pudding is in the eating, the question that thus remains is whether non-financial sectors like the energy sector do indeed contribute to systemic risk (as the banking sector does) and if so to what extent? To answer this question, in our 2015 article 'Systemic risk in the energy sector – Is there need for financial regulation?', we investigated how

systemic risk *within* the energy sector compares to systemic risk *within* the financial sector, as well as the degree of contagion risk *from* the energy sector *towards* the financial sector. This latter form of contagion risk formed the primary reason for including energy sector derivative trading in the scope of EMIR.

To empirically test the degree of contagion risk our research uses a proxy for systemic risk; this is based on the chance of companies defaulting given that at least one other company defaults, in other words, the expected fraction of 'additional failing firms'. It also introduces an indicator for the causality of contagion risk, because the direction of the contagion is an essential element underlying regulation.

Interestingly, linkages between companies in distress (in other words, the chance of failures spreading *within* a sector) are highest in the energy sector. That is, higher than in the construction, food, insurance, and even the banking sector. The extensive use of derivatives might play an important role in this regard: energy companies are generally each other's counterparty in derivative contracts. Another explanation is the high degree of vertical integration in the sector, with firms controlling both production and networks for transmission and distribution. This integration provides a channel for financial contagion within the energy sector. Finally, there is a strong correlation between the economic performances of energy firms, as energy prices are closely tied to the international price of crude oil. Changes in this price constitute a fundamental indicator for the economic wellbeing of the energy sector as a whole.

#### **Risk of direct impact on the real economy?**

In testing the contribution to systemic risk, the question is first whether an outcome in which risks are relatively



intertwined in the energy sector – via the use of derivatives or not – causes a *direct* impact on the real economy. The potential *direct* impact of OTC commodity derivative trading by the energy sector on the real economy is generally seen to operate via the price mechanism – and more specifically through the risk of price shocks due to speculation on energy derivative markets. Based on earlier research in our 2011 study *Curtailing Commodity Derivative Markets*, we conclude that high systemic risk within the energy sector is mainly a problem for the energy sector itself. The high expected fraction of additional failing firms means that a localized adverse shock in the energy sector will have repercussions for more energy companies, and potentially for the energy sector as a whole. However, there is no empirical evidence that the defaults of energy companies will pose a direct negative externality to the real economy.

**Contagion risk to financial sector – indirect impact**

More important for the assumption that the energy sector would pose

systemic risk is the second question: whether there is contagion risk from the energy sector towards the financial sector. This would imply an *indirect* impact on the real economy. We find that, on average, contagion risk runs from the banking sector towards the energy sector and not the other way around. Moreover, compared to the food and construction sectors, the energy sector does not stand out in terms of contagion risk towards the banking sector. Because the use of derivatives in the food and construction sectors is much lower than in the energy sector, the results indicate that the mere use of commodity derivatives by firms in the energy sector does not seem to be an essential element affecting the magnitude of potential contagion.

**Conclusion**

The hypothesis underlying regulation of the energy sector – that the high use of commodity derivatives implies relatively high contagion risk from the energy sector towards the banking sector – is not supported by the empirical data. This provides

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**‘... THE EXACT CONNECTION BETWEEN SYSTEMIC RISK AND OTC TRADING BY NON-FINANCIAL SECTORS REMAINS UNKNOWN.’**  
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a first check of the need for financial regulation in the energy sector, and it turns out to be negative. However, further research into the nature of systemic risk in the energy sector is needed. We conclude that currently, from an economic point of view, both the need for, and the design of, EMIR lack conclusive analysis with regard to the inclusion of at least the energy sector. More generally, the exact connection between systemic risk and OTC trading by non-financial sectors remains unknown. The political haste in implementing strict regulation in the aftermath of the severe financial crisis is understandable, but continuing on this road without sound foundations is not.

*This article is partly based on: M. Kerste, M. Gerritsen, J. Weda, and B. Tieben, ‘Systemic risk in the energy sector – Is there need for financial regulation?’, Energy Policy, 78 (2015), 22–30.*



**Cause and effect: the impact of European regulation**

Peter Caddy

The European oil market is experiencing a veritable tsunami of new legislation and regulation which has not yet reached its full course and which will have profound consequences on the way oil is traded.

The impetus for the new European regulation comes out of two events. The first was the 2008 crude price rise to USD 147/barrel which destabilized the plans and aspirations of many European political leaders and led to accusations that the oil market

was either rigged or in the hands of odious speculators. The second was the 2012 Libor scandal which, although having nothing to do with oil, confirmed, to those inclined to believe that markets are inherently immoral, that action was needed to prevent fraud and manipulation. The distinction between financial markets and trade in commodities was then deliberately muddled by some European governments to surreptitiously extend financial market regulation into the trading of commodities.

**Risks of moving to ‘rules-based approach’ for EU regulation**

As a consequence, oil trading is facing a new regulatory regime. Instead of the traditional ‘principles-based approach’ of UK regulators, with an emphasis on market integrity, the European Union (EU) is instituting a ‘rules-based

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**‘A RULES-BASED APPROACH PLACES THE EMPHASIS ON THE IDENTIFICATION AND PUNISHMENT OF WRONG DOERS ...’**  
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