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REPORT

Use of prudential regulation mechanisms to promote effective supplier risk management in the energy sector

12.11.2024

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Customers and Retail Markets Working Group

Ref: C24-MRM-171-03

DD.MM.YYYY

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Arrondissement judiciaire de Bruxelles – RPM 0861.035.445

Information page

Abstract

During the energy crisis, several suppliers exited the market due to financial reasons and/or to a lack of (or poorly defined) hedging strategies. This experience demonstrated the need to ensure the reliability of suppliers and the coverage of bankruptcy risk and to mitigate the consequences of such events on consumers.

Prudential regulation, be it through hedging requirements, financial obligations, stress testing or risk management, has been considered one of the key solutions to address this challenge, as evidenced by the new provision (Article 18a) on supplier risk management established in the amended Electricity Directive (EU) 2024/1711 of the Electricity Market Design reform (hereafter, EMD Directive). The aim of this Article is to avoid hit and run strategies and to protect consumers against risky sourcing strategies.

Some national regulatory authorities (NRAs), like Ofgem (Great Britain) and ACM (the Netherlands), have already implemented specific prudential regulation mechanisms to govern supplier risk management. CRE (France) plans to establish similar mechanisms in the short term. Meanwhile, VREG (Belgium) has a well-functioning supply license procedure, which includes the monitoring of financial data, hedging strategies and risk management. The present report describes how these countries approach prudential regulation mechanisms. Additional approaches to supplier risk management in Sweden, Germany, Portugal and Spain are also shared. These countries have a variety of approaches and prudential measures that can be an inspiration for when setting up relevant frameworks.

This report itemises some baseline considerations that every NRA should contemplate and addresses a variety of tools and mechanisms which can be applied when implementing Article 18a in the EMD Directive. Since the Directive is not prescriptive on the tools to be used, and given the variety of mechanisms already in place in the energy, banking and insurance sectors, this report includes some key considerations and guidance to support competent authorities in implementing the procedures and mechanisms they deem necessary, suited to their MS's needs and specificities.

Target audience

National Regulatory Authorities, European Commission, suppliers, energy sector federations, traders, gas/electricity customers, competent authorities for consumer protection, consumer representative groups, Member States, academics and other interested parties.

Keywords

Consumer rights; Prudential Regulation; Hedging; Stress tests; Electricity Directive; EMD; key considerations; guidance; good practices, monitoring, risk management, governance, financial obligations; supplier risk management,

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Related documents

CEER Documents

- Beyond the crisis: report on consumer protection and market measures for better functioning markets
- ACER-CEER: Reaction to the European Commission's public consultation on electricity market design
- Energy Retail and Consumer Protection 2023 Market Monitoring Report
- ACER-CEER 2024 Market Monitoring Report on Energy Retail and Consumer Protection

External Documents

- Directive (EU) 2024/1711 of the European Parliament and of the Council of 13 June 2024 amending Directives (EU) 2018/2001 and (EU) 2019/944 as regards improving the Union's electricity market design
- Directive (EU) 2024/1788 of the European Parliament and of the Council of 13 June 2024 on common rules for the internal markets for renewable gas, natural gas and hydrogen, amending Directive (EU) 2023/1791 and repealing Directive 2009/73/EC
- Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures
- Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012
- Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II)
- https://www.cre.fr/fileadmin/Documents/Consultations_publiques/2024/240703_Consultation_regles_prudentielles_2024-08.pdf
- https://www.acm.nl/system/files/documents/openbaar-besluit-beleidsregel-betrouwbare-levering-en-continuiteit.pdf
- https://ei.se/om-oss/publikationer/publikationer/ovrigt/2024/bilateral-hedging-of-electricity-in-sweden---konsultrapport-dnv
- Decision on Strengthening Financial Resilience | Ofgem
- Decision on introducing a minimum capital requirement and ringfencing customer credit balances by direction | Ofgem
- https://www.vreg.be/nl/energieleverancier-worden
- Paper on prudential rules for electricity supply, European Energy Retailers (paper not yet publicly available at time of publication)

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Executive Summary

During the energy crisis, several suppliers exited the market due to financial reasons and/or to a lack of (or poorly defined) hedging strategies. This experience demonstrated the need to ensure the reliability of suppliers and the coverage of bankruptcy risk, and to mitigate the consequences of such events on consumers.

When Directive (EU) 2019/944 was amended in June 2024 (hereafter, EMD Directive), measures were introduced in Article 18a on "supplier risk management" to control the supply and hedging strategies of electricity suppliers, with the aim of ensuring their resilience in the event of sharp price fluctuations on the wholesale market.

The analysis and examples in the present paper focus mainly on Article 18a in the EMD Directive, with some minor insights on related provisions on supplier financial robustness introduced by Article 8(3) of the recast Gas Directive in the Hydrogen and Gas Decarbonisation Package (hereafter Gas Directive). Article 18a of the EMD Directive compels NRAs (or a national competent authority) to implement prudential regulation measures for electricity suppliers, while Article 8(3) foresees an assessment of the financial strength of gas suppliers as a potential criterion in the supply authorisation procedure. However, nothing prevents Member States from aligning requirements for gas suppliers with the electricity prudential regulation resulting from Article 18a. The transposition of the EMD Directive article into law must take place by 17 January 2025, while the gas provision should be transposed by 5 August 2026.

The objective of the present paper is to provide an interpretation of Article 18a, to present some existing approaches to supplier risk management, including a variety of prudential mechanisms in Great Britain, the Netherlands, France, Flanders (Belgium), Sweden, Germany, Portugal and Spain and to help competent authorities build their own mechanisms drawing on already existing ones.

This paper also provides some key considerations and guidance on how to implement Article 18a. The Council of European Energy Regulator's (CEER) considerations and guidance are based on the observation that Article 18a leaves room for tailor-made prudential regulation measures, since each MS has its own market specificities, which is why there is no one-size-fits-all solution. In CEER's understanding, the competent authorities can choose the prudential tools they deem to be the most appropriate and robust and adapt the tools to the specific characteristics of the national market when designing their framework for supplier risk management. Regulatory authorities also have the flexibility to take into account various factors, such as: general structure of the market; level of competition; access of suppliers to own-generation facilities; suppliers' financial capacity; suppliers' level of exposure to wholesale electricity prices; supplier size; the number of suppliers in the market; the mix of contracts available (fixed, variable/indexed, dynamic contracts); the liquidity of the markets; the presence/absence of termination fees.

The paper describes prudential regulation practices in the banking and insurance sector. These practices can be an inspiration for the surveillance of suppliers' practices, through reporting requirements on risk management and governance, or hedging requirements, as well as the financial consequences of these practices on suppliers through stress tests or monitoring financial ratios.

The paper provides a **toolbox** outlining **possible mechanisms** an NRA can choose when designing a supplier risk management framework:

Hedging requirements
The paper provides guidance on the implementation of quantitative hedging requirements, especially in terms of the *monitoring method*, the r*elevant axes to consider to adapt and customise the control*, and the *reporting method*.

Stress tests
In order to evaluate the impact of extreme market scenarios on the financial health of suppliers, these tests help suppliers prepare for and respond to unforeseen circumstances.

Financial obligations
Hedging obligations will not necessarily make it possible to cover all the risks that could jeopardise the supplier's ability to continue its business. Therefore, it may be considered necessary to ensure that suppliers have a sufficient financial base to deal with the contingencies of their business.

Risk assessment and risk management strategies
Competent authorities can consider formalising hedging and risk management strategies that should be reflected in the company's governance. Suppliers should be able to demonstrate how they are managing their (financial) risks and resources.

CEER also lists some **insights and constraints** competent authorities can take into account:

Framework and procedures
Flexibility and agility of the mechanism
When designing prudential mechanisms, a balance is to be found between the agility and the stability of the mechanism. Competent authorities need to adapt the rules to market evolution but also need to give suppliers enough time to adapt to the mechanism.

Harmonisation between electricity and gas
Article 18a applies to the oversight of electricity suppliers. EU laws do not include any obligation for NRAs to ensure that gas suppliers have in place an appropriate hedging strategy. Nonetheless, the implementation of a complete supplier risk management framework of electricity suppliers while foreseeing minimal surveillance of the financial soundness of gas suppliers seems difficult to justify. Competent authorities could envision an undistinguished application of "Article 18a"-compliant prudential regulation of electricity and gas suppliers.

Incorporation in licensing/registration procedures and authorities
The supplier license/registration procedure, if applicable, could be used as a tool for prudential regulation. In that case, measures should be taken to coordinate the procedure when the competent authority for supplier risk management and the authority in charge of licensing differ.

Confidentiality of hedging data
Data allowing to characterise and assess the hedging strategy of a supplier might be sensitive and require confidentiality and non-disclosure provisions for suppliers to feel confident to share these data.

Scope of the prudential regulation measures
Correlation between the risks to tackle (under vs. over-hedging) and the type of contracts/supplier falling within the scope of the measures
When implementing prudential regulation mechanisms, CEER advises the competent authority to define the risks to be addressed by hedging requirements in accordance with the situation to be solved (mitigating against under or over-hedging).

Balance between hedging requirements and freedom of procurement
Hedging strategies are considered important parts of the business strategies of actors in a competitive market. Suppliers should remain free to determine their own hedging strategy, however, they are required to prove its robustness.

Appropriate measures in case of irregularities
The aim of prudential regulation is for suppliers to hedge sufficiently and, if not, to accompany them as an NRA in that direction. This does not remove the need to consider the consequences and actions to be taken in case of insufficient hedging.

Ambitions versus resources
Balance between the risk of suppliers and administrative burden
Take into consideration suppliers' specificities and the time needed to adjust to in-depth reporting and hedging requirements.

Balance and between the ambitions of the framework and available resources
Competent authorities might need to prioritise their control depending on their resources. The ambition of the framework should be matched with the resources allocated to the NRA (or competent authority) for this purpose. The new EU provisions can have an impact both on the number of personnel and on the required expertise, which is very difficult to assess before the transposition of the EMD Directive. NRAs can also think about a (partial) delegation of the workload to suppliers or to third parties (consultancy firms, for example).

Figure 1 summarises the four tools of the toolbox, describes the key considerations to be taken into account and outlines the insights and constraints competent authorities take into account.

Toolbox

	Key considerations
Stress test	Balance between administrative costs and depth of the analysis
Financial obligations	• Potential criterion to derogate from normative hedging rules • Additional tool to cover the blind spots of hedging requirements
Reporting on risk management	Consistency of actual corporate governance with reported hedging and risk management strategies
Hedging requirements - **Method of monitoring**	• Value or volume assessment • Acceptance/tolerance of open positions, under well-defined financial conditions • Prevention of under-hedging
- **Market specificities**	• Differentiation between mass market & large consumers, and the existence of termination fees in the mechanism • Scope of the mechanism (from fixed to all contracts subject to a contractual commitment) • Accurate mapping by suppliers of the volumes hedged with the various types of hedging instruments • Assessment of hedging instruments' risk profiles • Risk transfer to external entities such as third-party sourcing companies through several measures • Vigilance about "hit and run" strategies fostered by market contexts of intense price competition
- **Reporting**	• Complementarity of ex-ante and ex-post reporting • Merging existing reporting practices with standardised regulatory templates • Frequency of reporting

Framework and procedures	Scope of the mechanism	Ambitions versus resources
• Flexibility and agility of the mechanism • Gas and electricity harmonisation • Incorporation in licensing/registration procedures • Sensitive hedging data to be ensured by confidentiality agreements	• Correlation between the risks to tackle (over vs. under hedging) and the type of contracts/supplier falling within the scope • Balance between hedging requirements and freedom of procurement • Appropriate measures in case of irregularities	• Balance between the risk of the suppliers and administrative burden • Balance between ambitions and available oversight resources

Insights and constraints

1 Introduction

When Directive (EU) 2019/944 was amended in June 2024 (hereafter, EMD Directive), measures were introduced in Article 18a on "supplier risk management" to control the supply and hedging strategies of electricity suppliers with the aim of ensuring their resilience in the event of sharp price fluctuations on the wholesale market.

In this regard, Recital 18 of the amended EMD Directive states that "When suppliers do not ensure that their electricity portfolio is sufficiently hedged, changes in wholesale electricity prices can leave them financially at risk and can result in their failure and their passing on costs to consumers and other network users."

In particular, Article 18a on "supplier risk management" requires NRAs (or an alternative designated competent authority) to ensure that suppliers adopt an appropriate hedging strategy in line with the contracts signed on the retail market. The monitoring of suppliers' hedging strategies may take into account various factors, such as: their access to own-generation facilities, their financial capacity, their level of exposure to wholesale electricity prices, their size and the structure of the market.

The Directive allows the competent authority designated by the Member State to define the regulatory framework as it deems most appropriate.

The present report brings together regulatory experience with supplier risk management and prudential regulation mechanisms, and considers the lessons they can provide for the implementation of the new requirements in the EMD Directive.

1.1 Background

Energy prices started to rise 2021, initially in the context of the post-COVID economic recovery. However, the energy price rise was accelerated by gas supply problems following the launch of Russia's invasion of Ukraine in February 2022, which unleashed a genuine energy crisis across Europe. High wholesale gas prices had an immediate effect on electricity prices, as they are linked together under the wholesale market's merit order system, where the energy source with the highest marginal cost (usually fossil fuel-based) sets the overall electricity price.

This energy crisis led to bankruptcies of some suppliers and contract terminations in some Member States, reaching its climax by the end of 2021 for gas and electricity. On the household market, the number of electricity supplier exits due to financial problems[1] increased to 62 in 2021 before decreasing to 23 in 2022, according to the ACER-CEER Energy Retail and Consumer Protection 2023 Market Monitoring Report.

[1] This includes companies declaring bankruptcy, cancelling contracts/exiting the market to avoid bankruptcy, or companies having activity licences revoked due to inability to keep market guarantees/to non-payments.

At the root of several of the bankruptcies, were retail contracts including commitments on price that suppliers did not replicate in their sourcing strategy. The market exposure caused by this insufficient hedging weakened suppliers facing unhedged or sudden price hikes.

The energy crisis has shown the need to ensure the reliability of suppliers and their risk coverage against bankruptcies. Supplier failures hurt consumer trust in energy markets. Suppliers' inability to respect their contractual commitments directly impacts consumers and raises the costs of support measures taken by Member States to limit the consequences of crises.

On 14 March 2023, the European Commission proposed a reform of the EU electricity market, with the aim of reducing price volatility for consumers and creating favourable conditions for investors in low-carbon energy.

As a result, the EMD Directive (EU) 2024/1711 amending Directives (EU) 2018/2001 and (EU) 2019/944 as regards improving the Union's electricity market design was formally adopted on 13 June 2024 and published on 26 June 2024 (https://eur-lex.europa.eu/eli/reg/2024/1747/oj).

The transposition of the Directive into national law must take place within 6 months of the date of publication of the Directive in the Official Journal of the European Union. Member States have to bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 17 January 2025 (except for some articles with a longer transposition period of two years).

In addition to existing measures[2], the EMD Directive aims at creating long-term conditions for an electricity market resilient to future energy crises and extraordinary price increases. It responds to the European Council's call for the Commission to come up with such a structural response to address the emergency.

In particular, the Electricity Market Design (EMD) reform seeks to enhance consumer protection against price volatility, underlining there is "a need to respect consumer choices and to allow consumers to benefit from a variety of contractual offers, and to shield household customers from high prices during an energy crisis". It calls on Member States and NRAs to strengthen the framework for prudential supervision of electricity suppliers by ensuring "the existence of appropriate hedging strategies" for suppliers to avoid cases in which wholesale electricity prices "leave them financially at risk and, result in their failure, passing on the risks to consumers and other network users"[3].

[2] Some of these measures have been described in the following CEER publication: Beyond the Crisis: Consumer protection and market measures for better functioning markets.

[3] Source: Recital 18, EMD Directive.

Thus, the EMD reform introduces a legal base for the surveillance of "supplier risk management" strategies in Article 18a, which requires "Regulatory Authorities" or "an alternative competent authority" designated by the Member State, to ensure that suppliers "have in place […] appropriate hedging strategies" and "take all reasonable steps to limit their risk of failure". Article 18a is not prescriptive on the tools used for this regulatory oversight, although it mentions the possibility to use stress tests or requiring suppliers to use power purchase agreements. Recital 18 notes that "stress tests and reporting requirements" may be "tools" that could be used to assess supplier hedging strategies. However, the provision provides for flexibility in the framework, regarding a range of aspects, namely the size of the supplier, market structure, liquidity constraints and the instruments used by suppliers as hedging material.

1.2 Objectives and scope of the document

The target of this paper is the competent authority, who will be responsible for designing and implementing a supplier risk management framework. The transposition deadline of 17 January 2025 is for the Member States, who have to designate the competent authority. This aforementioned authority will subsequently have to design and implement prudential regulation mechanisms.

The report's objective is to provide an interpretation of Article 18a, present some existing prudential mechanisms[4], provide relevant examples and help competent authorities build their own frameworks drawing from already existing ones. The report also provides some key considerations and guidance on what to take into account and what can be included when implementing Article 18a.

The main focus of the paper is on Article 18a with some minor insights on Article 8(3) of the recast Gas Directive (EU) 2024/1877 in the Hydrogen and Gas Decarbonisation Package, as the objectives of the two articles differ significantly. The article in the Gas Directive aims to ensure the financial strength of natural gas suppliers through inclusion of dedicated criteria as part of the supply licensing process. The difference between prudential regulation in gas and electricity established in the EMD Directive may lead to distinct national frameworks between gas and electricity, but the gas requirements can also be aligned with the requirements for electricity.

In many countries, there are examples of suppliers that went bankrupt because of insufficient hedging strategies and risky business models. The goal of this paper is to provide relevant examples of procedures to avoid risky supplier strategies and to introduce mechanisms for supplier risk management and help competent authorities build their own mechanisms. This report poses an opportunity to share experiences and provide assessments by collecting current prudential mechanisms and good practices.

[4] Prudential mechanisms are measures designed to assess the ability of regulated entities to measure, manage and mitigate risks, and to incentivise these entities to adopt responsible practices considering the risk generated by their activity.

With a view to facilitating Member States' transposition of the EMD Directive and supporting competent authorities, who will have to implement the provisions, this paper presents prudential mechanisms and perspectives on supplier risk management in some countries in the EU and Great Britain. Although some countries have already had measures in place before the energy crisis, the number of competent authorities have since expanded and tightened the monitoring of suppliers and implemented prudential regulation measures.

The report provides insights on the topic from national (and regional) experiences in eight regulatory authorities: Ofgem (Great Britain), ACM (the Netherlands), CRE (France), VREG (Belgium), Ei (Sweden), BNetzA (Germany), ERSE (Portugal) and CNMC (Spain).

This paper also gives some key considerations and guidance on how to implement Article 18a. It is important to keep in mind that there is no one-size-fits-all solution. Member States have different market structures, different approaches, different systems. In order to design and implement an effective supplier risk management framework, regulatory authorities need flexibility, to keep take into account, for example: the general market structure; the types of contracts available; the number of suppliers; the size of the supplier; the level of competition; the liquidity of the markets; the presence or absence of termination fees.

Operational constraints of workload, both for NRAs and suppliers, should also matter when designing the mechanism, and these constraints vary considerably across Member States. Thus, the approach in this paper keeps room for interpretation in accordance with the EMD Directive. The aim of Article 18a is to avoid hit-and-run strategies and to protect consumers against risky sourcing strategies. These strategies limit the resilience of a supplier in the event of high price volatility, and can lead to supplier defaults, additional costs for the community and large and sudden bill increases.

2 Prudential regulation to be implemented in 2025

2.1 Article 18a and Recital 18

The following provisions in the EMD Directive (EU) 2024/1711 have to be implemented into national law by 17 January 2025:

Recital 18: "When suppliers do not ensure that their electricity portfolio is sufficiently hedged, changes in wholesale electricity prices can leave them financially at risk and can result in their failure and their passing on costs to consumers and other network users. Hence, suppliers should be appropriately hedged when offering fixed-term, fixed-price electricity supply contracts. An appropriate hedging strategy should take into account the suppliers' access to its own generation and its capitalisation as well as its exposure to changes in wholesale market prices, the size of the supplier or the market structure. The existence of appropriate hedging strategies can be ensured by general rules overseen without undertaking a specific review of the positions or strategies of individual suppliers. Stress tests and reporting requirements on suppliers could be tools by which to assess supplier hedging strategies."

Article 18a on supplier risk management:

"1. Regulatory authorities or, where a Member State has designated an alternative independent competent authority for that purpose, such a designated competent authority, taking into account the size of the supplier or the market structure and including, if relevant, by carrying out stress tests shall ensure that suppliers:

(a) have in place and implement appropriate hedging strategies, to limit the risk of changes in wholesale electricity supply to the economic viability of their contracts with customers, while maintaining liquidity on and price signals from short-term markets;

(b) take all reasonable steps to limit their risk of supply failure.

2. Supplier hedging strategies may include the use of power purchase agreements as defined in Article 2, point (77), of Regulation (EU) 2019/943 or other appropriate instruments, such as forward contracts. Where sufficiently developed markets for power purchase agreements exist which allow effective competition, Member States may require that a share of suppliers' risk exposure to changes in wholesale electricity prices is covered using power purchase agreements for electricity generated from renewable energy sources matching the duration of their risk exposure on the consumer side, subject to compliance with Union competition law.

3. Member States shall endeavour to ensure the accessibility of hedging products for citizen energy communities and renewable energy communities and to put in place enabling conditions for that purpose."

Meanwhile, in the Hydrogen and Gas Decarbonisation Package, the new provisions aim to ensure the financial strength of natural gas suppliers through the criteria for granting supply licensing.

Article 8(3) on Authorisation procedure in the recast Gas Directive (EU) 2024/1788: "3. For natural gas suppliers, Member States may assess the financial strength and technical capabilities of applicants as criteria for authorisation. Such criteria shall be fully transparent and non-discriminatory."

This report focuses on paragraph 1 of Article 18a.

Paragraph 2 is only shortly discussed in the paper when mentioning the types of hedging instruments.

Given the uniqueness of the theme, paragraph 3 can better be discussed in the context of energy communities. CEER is working on a future report about energy communities.

2.2 Interpretation of Article 18a

As discussed above, the main focus of this paper is on Article 18a of the EMD Directive. We only give some minor insights of Article 8(3) of the recast Gas Directive because of the different objectives of the two articles. The article of the recast Gas Directive aims to ensure the financial strength of natural gas suppliers within the criteria for granting supply licensing, but it is not mandatory.

In order to shield consumers from high variations on wholesale market prices, the EMD Directive regulates supplier risk management in Article 18a.

Text Recital 18	CEER's interpretation
Hence, suppliers should be appropriately hedged when offering fixed-term, fixed-price electricity supply contracts	Even if the recital specifically mentions fixed price contracts, CEER considers that every commitment on the price, be it completely fixed or not, should fall under the scope of the prudential rules. NRAs may target a larger diversity of contracts than «fixed price» contracts and use more generic descriptions like: "suppliers with contractual commitments on price". The term "appropriately" allows the NRA or the designated competent authority freedom to set the framework to fit national specificities.
An appropriate hedging strategy should take into account the suppliers' access to its own generation and its capitalisation as well as its exposure to changes in wholesale market prices, the size of the supplier or the market structure.	The objective of the Article is to limit the risk of changes in wholesale electricity supply to the economic viability of their contracts with customers. The prudential mechanisms should not hinder short term market liquidity and its ability to send signals to consumers. The following elements should be considered when designing the rules:

Text Recital 18	CEER's interpretation
	On the one hand, key characteristics of the market: • Number of existing suppliers; • Level of competition; • Invoicing scheme (e.g., the supplier is the Single Point of Contact (= SPOC), that invoices commodity + grid tariffs + VAT and levies, or the supplier only invoices the commodity); • Types of supplier contracts; • Existence of termination fees; • Customers' credit balance and/or weight of levies (suppliers sometimes use the credit balances of their customers to pay the invoices of their own suppliers; in some countries suppliers also invoice levies and taxes in addition to the pure commodity); • Guarantees to network operators (e.g., in some countries in order to have access to the distribution grid, suppliers have to provide financial guarantees to the DSOs). On the other hand, major features of the suppliers: • Size of the supplier; • Access to its own generation (e.g., weight of own-generation, renewable generation or not, intermittency & technology); • Exposure to changes in wholesale market prices (e.g., futures & derivatives markets as well as hedging with bilateral contracts); • Capitalisation (equity, capital, financial resources, vertically-integrated utility (VIU) or not); • Business model (e.g., risky business model, only a reseller or fully vertically integrated, etc.).
The existence of appropriate hedging strategies can be ensured by general rules overseen without undertaking a specific review of the positions or strategies of individual suppliers. Stress tests and	CEER underlines the use of the words *can* in 'can be ensured' and *could* in 'could be tools'. CEER considers the Directive sets principles and provides a non-exhaustive list of tools or instruments which could be relevant to use. It

Text Recital 18	CEER's interpretation
reporting requirements on suppliers could be tools by which to assess supplier hedging strategies.	is up to the competent authority to decide on the framework.

Text Article 18a	CEER's interpretation
In the electricity sector, the NRA shall ensure that electricity suppliers: (i) *have in place and implement appropriate hedging strategies*, (ii) *take all reasonable steps to limit their risk of supply failure*.	The term "appropriately" allows the NRA or the designated competent authority freedom to set the framework to fit national specificities.
Supplier hedging strategies may include the use of power purchase agreements or other appropriate instruments, such as forward contracts.	Eligible hedging instruments can include among others: • Electricity from physical assets; • Power Purchase Agreements; • Over the Counter (OTC) contracts; • purely bilateral contracts not traded or cleared in the exchange; • futures markets; • Day Ahead (spot) market; • Intraday (spot) market; • Swaps; and • Call options.

Table 1 – Interpretation of Article 18a

2.3 The need for prudential regulation in the energy sector

2.3.1.1 Why and how suppliers hedge

Suppliers can buy much of their energy requirements in advance, over a period of time, to secure a price and reduce the effect of large changes in wholesale prices. This practice is known as hedging, and it aims at managing risk and providing price certainty over time.

The day-ahead prices for electricity are volatile by nature. Price volatility implies financial risk. Suppliers aim to reduce this risk by entering into hedging agreements, such that they are confident that the consequences of defined negative outcomes will still be manageable. Hedging may also involve long-term contracting between the supplier and the producer, allowing the latter to make asset investments bankable.

Hedging limits suppliers' exposure to price increases and thus lowers their risk of bankruptcy, which can protect consumers from contract terminations and sudden price increases. Hedging also ensures some predictability regarding energy bills. Hedging requirements for suppliers aim to ensure that they act in a more financially responsible manner and take steps to bear an appropriate share of risk.

Suppliers may have different risk preferences, in terms of which risks they hedge, the time horizon for the hedge, the type of instruments they use, and how they create and maintain their hedging portfolios. They often use a portfolio strategy for hedging, meaning that the company gradually develops its wanted level of hedging by using contracts with different maturities and volumes. Suppliers may have strategies that allow for some flexibility with respect to how much of the underlying risk is hedged at any given point in time.

Hedging strategies may vary from supplier to supplier, according to their business objectives. Suppliers may also change their hedging strategies over time in reaction to market conditions or for other business reasons. Suppliers hedge based on their own commercial strategies, customer profile and risk appetite. Vertically-integrated suppliers (with own-generation assets) have more options for hedging than suppliers without generation assets.

Through hedging, suppliers reduce their own (and consequently their customers') exposure to wholesale market volatility. Short term trends in the wholesale electricity market take time to translate into changes on customers' electricity bills. Producers and suppliers generally take a long-term perspective (1-2.5 years) rather than a short term (monthly – quarterly) perspective when setting consumer prices. Suppliers employ this type of hedging strategy to increase certainty and help mitigate against exposure to adverse price movements in the future.

For electricity suppliers, the appropriate hedging strategy depends on the maturity of the contracts they sign with end-consumers. If downstream (retail) consumer contracts are longer term (e.g., one- or two-year contract durations), it is often in the supplier's best interest to also sign upstream (wholesale) hedge contracts, thus hedging the obligations the supplier has towards its customers. When a supplier enters similarly sized contracts both upstream and downstream (e.g., dynamic price contracts) its risk is low(er). In addition to hedging coupled to the offered contracts, suppliers may use hedging instruments as traders, regardless of the contract portfolio, just for profit reasons.

The hedging process can be broken down into 3 macro steps: setting the sales price, hedging (buying) volumes and adjusting hedged volumes to portfolio consumption. Each step is necessary to manage energy price risk.

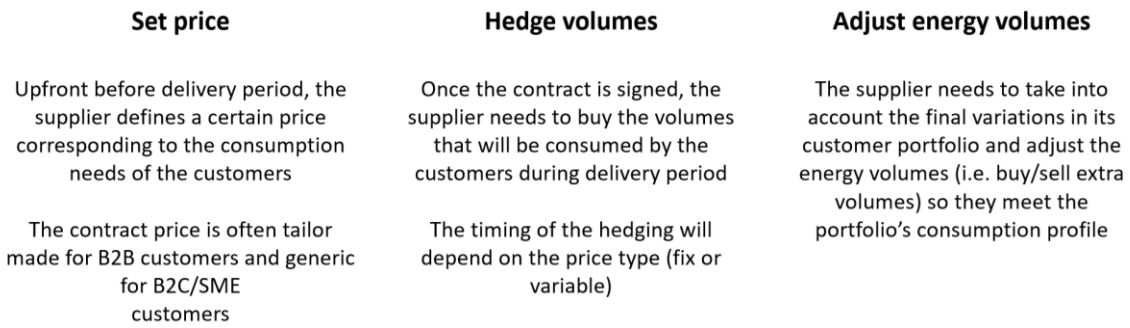

Figure 2 – Steps in the hedging process

3 Prudential mechanisms in banking and insurance

Prudential mechanisms are frameworks designed to assess the ability of regulated entities to measure, manage and mitigate risks, and to incentivise these entities to adopt sensible practices considering the risk generated by their activity.

Initially established in the banking and insurance sector given their importance in the current economic system, prudential regulation rules are already in force in some energy markets. The results of these mechanisms could inform the design of European energy prudential mechanisms, but only when considering the specific economic context.

3.1.1 Cross-sector comparison: banking and insurance

In this chapter, European prudential mechanisms in the banking and insurance sector will be described and used as a reference for comparison. For more details we refer to Annexes 2 and 3.

Banking sector

The transposition of Basel III international standards into EU law resulted in the European Capital Requirements Directive and Regulation (CRD V & CRR II, respectively), currently in force. The first version of the Basel accord was approved by the G10 in the late 1980s, in recognition that capital requirement standards were eroding, and required a worldwide standardisation to avoid unfair competition. These standards were gradually improved throughout the years until the adoption of CRD V/CRR II in 2019.

Capital requirements: These rules are at the heart of the Basel standards, and the ratios have been refined throughout versions of the accord. The initial version of the Basel standards required a minimum share (8%) of the bank's risk weighted assets to be held as capital. Subsequent versions of the Basel standards modified the definition of the ratio to reflect accurately the sensitivity to market, credit and operational risks, and later counterparty risk. The 8% threshold was then raised to include a mandatory conservation buffer of 2.5%, as well as counter-cyclical and systemic risk buffers set at the discretion of each EU MS given local market conditions. Moreover, Basel III standards provide a deeper analysis of the quality of capital through CET1[5] capital requirements, which ensure that high quality CET1 equity alone covers a sufficient share of risk weighted assets. Last but not least, Basel III standards, having drawn the lessons of the Lehman Brothers bankruptcy, set a new criterion on the leverage ratio of banking entities.

Liquidity requirements: Basel III introduced a short-term liquidity ratio (the Liquidity Coverage Ratio) and a long-term liquidity ratio (the Net Stable Funding Ratio), for which the standards set a minimum value of 1, allowing to face stressed scenarios of various durations.

[5] CET1: Common Equity Tier 1: a component of Tier 1 Capital, and it encompasses ordinary shares and retained earnings. It includes the core capital that a bank holds in its capital structure. The implementation of CET1 started in 2014 as part of Basel III regulations relating to cushioning a local economy from a financial crisis.

Stress tests: In Europe, the European Central Bank (ECB) conducts stress tests annually for supervised banks as required by the aforementioned CRD V, and stress tests are also part of the comprehensive assessments the ECB conducts.

Improvement of communication and market transparency: The results of the quantitative analysis described above are publicly available. More generally, since Basel II, standards place an emphasis on the importance of market discipline through financial communication. Last versions of the CRD especially compel banks to communicate on many financial elements across activities and countries.

Risk governance: The CRD V includes new rules to improve the governance of risk, by promoting specific processes, and framing the status of the risk manager.

Organisational measures: For instance, limits are set regarding the variable component for material risk-takers to avoid excessive risk-taking, and diversity criteria are introduced within composition of the board, to avoid the phenomenon of group think.

Insurance sector

The EU framework for prudential regulation in the European insurance sector was laid down by the Solvency I and II Directives. Since the 1970s, European rules already imposed a capital requirement considered a solvency margin. Solvency I was adopted in February 2002 and obliges insurance companies to respect a minimum solvency ratio. However, policymakers quickly felt the need to revamp the mechanism, which proved too simplistic and normative to account for the specificity of each insurance company, and too static to be efficient. As a response, the 2009 Solvency II Directive strengthens the mechanism based on 3 components:

Quantitative Requirements: The Solvency I ratio is replaced by the Solvency Capital Requirement (SCR), whose value is computed either by the regulators, through a standardised formula, or by the insurance company itself, through internal models. This SCR corresponds to the amount of capital needed to meet obligations over the next 12 months with at least a 99.5% probability, taking into account the main risks resulting from the activity (mainly subscription, credit, operational, liquidity and market risks). The eligible capital of the company should always exceed the level of its SCR. Below this threshold, the measures taken by the regulator become increasingly intense as the capital approaches the Minimum Capital Requirement[6], beyond which the authority would automatically intervene.

[6] Defined as the capital needed to meet obligations over the next 12 months with an 85% probability (usuallybetween 25 and 45% of SCR).

Qualitative requirements: The Solvency II Directive also sets objectives for the implementation of an efficient risk management policy, and efficient organisational rules with respect to risk governance. Authorities must ensure that adequate risk management policies are in place, and insurance companies must conduct a risk assessment process called ORSA[7]. In addition, responsibilities regarding risk must be identified and separated. The organisation should be transparent, and risk policies should be explicit within the entity.

Disclosure and transparency requirements: These requirements apply in addition to the first pillars. The Directive seeks to standardise and enhance communication towards customers, investors and regulatory authorities. The companies must publish two annual reports: the SFCR[8] (publicly available), and the RSR[9] (for the regulator).
The design of the mechanism should be driven by the objective set by the competent authority.

The banking and insurance sectors are sources of systemic risk: the importance of some companies in the economy is such that, in case of bankruptcy, a chain reaction could result in a brutal degradation of the whole economic system. Hence why insurance and banking prudential mechanisms seek to prevent the failure of systemic actors at any price. Insolvency being the strongest boundary in the regulation of systemic actors, the associated prudential mechanisms require advanced and quantitative financial surveillance through stress tests and accurate financial ratios.

3.1.2 Inspiration from the banking and insurance sector for the energy sector

The energy supply sector is not at the root of a substantial systemic risk. Inefficient suppliers following reckless strategies should not be artificially kept afloat at all costs when facing financial problems. Thus, the competent authorities designated by Member States should be free to act as regards surveillance of supplier practices which could be at the root of failures that may affect final consumers (through reporting requirements for risk management and governance policies, or hedging requirements), as well as the financial consequences of these practices on suppliers (through stress tests or financial ratios).

[7] ORSA: Own Risk & Solvency assessment: a set of processes constituting a tool for decision-making and strategic analysis. It aims to assess, in a continuous and prospective way, the overall solvency needs related to the specific risk profile of the insurance company.

[8] SFC: Solvency and Financial Condition Report: a report on an annual basis intended for the public.

[9] RSR: Regular Supervisory Report: a report that is provided every three years for the exercise of prudential supervision.

The scale at which mechanisms should be normatively defined also differs between sectors: banking and insurance companies are often internationally developed, and markets have a strong and worldwide interdependence, completely in line with the scale at which prudential mechanisms were defined for these sectors (European for insurance, potentially worldwide for banking). The worldwide energy retail sector is more siloed, with a high share of nationally anchored suppliers. The national market structure in Europe also differs highly from one country to another. Hence, standardised European prudential mechanisms would not be efficient to tackle the specific issues faced by each Member State. However, in the case of international supply companies, the coordination of competent authorities would be a useful tool to identify risk-bearing companies, thanks to the disclosure between authorities of suppliers facing financial issues or adopting reckless strategies locally.

Policy makers have also decided to place an emphasis on the transparency of market actors as an additional leverage to foster better practices in the banking and insurance sectors, under the additional pressure of customers and investors. Competent authorities can use this additional soft regulation through enhanced communication on robustness metrics (results of stress tests, fulfilment of guidelines to assess hedging strategies, etc.) associated to the prudential mechanism they envision for suppliers.

In the banking and insurance sectors, prudential mechanisms have been revamped over the years, and often to avoid the renewed occurrence of an already observed event (for instance, Basel III was partly designed to avoid situations like the Lehman Brothers' failure). Article 18a of the EMD Directive is designed in response to a substantial crisis as well, and the first mechanisms designed for its transposition will possibly show imperfections and blind spots. Thus, national frameworks should endeavour the continuous improvement of their mechanisms, which is an essential component of its effectiveness and up-to-dateness given market evolution. For instance, enhanced flexibility should be given by Member States to competent authorities in the definition of parameters for quantitative analysis, and reporting content requirements (required data as well as templates).

The Solvency II Directive allows regulated entities to decide whether risk-based capital requirement thresholds should be computed through internal models or through generic ratios provided by the competent authority. Partly delegating the workload regarding quantitative analysis to regulated entities could allow competent authorities to partially compensate for the workforce asymmetry often observed, though such a practice should be complemented by unannounced audits from regulatory authorities to check the rigour of the approach. Analysis should only be led by regulated entities if the authority is able to determine at the end of such audits whether or not the approach undermines the principle of equal treatment of suppliers. For instance, the competent authority could delegate stress tests to suppliers but only if the underlying scenarios on price, temperature, and consumptions are specified in advance by the authority.

Finally, the Solvency and CRD/CRR legislation rely on the useful pillar of qualitative assessment of governance and risk management tools. This pillar should not be neglected by Member States for the transposition of Article 18a, as breaches detected through quantitative regulation can be symptoms of a broader breach in the way the entity handles risks, or on the quality of information flow, decision reactivity and competence of decision makers.

4 Current prudential mechanisms and views on prudential regulation in the energy sector

The energy crisis has shown the need to ensure the reliability of suppliers and risk coverage against bankruptcies.

Supplier risk management, through hedging requirements or financial requirements, has been considered one of the key solutions in the EMD reform to counter suppliers' risk of bankruptcy. Some countries have already implemented such measures, while others faced the crisis with alternative mechanisms.

There is no unique application of prudential mechanisms and not every country may find it relevant or necessary to implement the same level of prudential rules, primarily due to factors such as their economic situation, market structure, and the effectiveness of existing mechanisms prior to the crisis in safeguarding both suppliers and consumers. There are alternative mechanisms that were in existence before the crisis and have proven to be effective.

This chapter describes the prudential measures applied to the energy sector in Great Britain, the Netherlands, France and Flanders (Belgium), in place either before implementation of the EMD Directive or with foresight of the coming EMD Directive.

The chapter also provides case studies for Sweden, Germany, Portugal and Spain. These countries have a variety of approaches and mechanisms in place that can be an inspiration for setting up prudential procedures in line with Article 18a.

A survey by CEER in April-May 2024 showed that, at that time, the majority of Member States had not yet decided on the implementation and criteria to take into account and hence do not have prudential regulation mechanisms in place yet.

4.1 Great Britain: Financial resilience and controls policies: Ofgem[10]

Remark: since Great Britain is not part of the European Union, there is no obligation for Great Britain to implement the EMD Directive.

[10] Source: Ofgem.

4.1.1 Fact box Great Britain

Number of household customers: 29 578 721
Annual switching rate of household customers (by number of meter points): 6.3%
Number of active suppliers for electricity and gas: 59 (electricity), 52 (gas)
Total number of active suppliers that exited the household market in 2023: 2
Number of supplier bankruptcies in 2021, 2022 and 2023: There were a large number of supplier failures in the UK during the energy crisis, with 29 suppliers exiting the market between July 2021 and May 2022
Number of customers impacted by the bankruptcy of suppliers for 2021, 2022 and 2023: 4 million
Can suppliers apply contract termination fees for fixed-term, fixed-price contracts in cases when household customers terminate their contract prior to the expiration of contract?: Yes
Uptake of contracts by household consumers: 11% market-based fixed-price, fixed-term contracts, 89% regulated variable contracts

4.1.2 Background

Extreme volatility in the energy sector contributed to the market exit of 29 suppliers in the period between July 2021 and May 2022. This led to significant impacts for consumers, with nearly 4 million experiencing the disruption of a supplier failure and all consumers facing higher prices due to costs being mutualised.

In response, Ofgem introduced a new prudential regulatory regime, to build capitalisation of the sector, enhance resilience to external shocks and put the retail market on a solid foundation to deliver the innovation, high standards and consumer outcomes needed to achieve our principal objective: to protect the interests of existing and future consumers.

These measures include:

Policy	Details
Enhanced Financial Responsibility Principle (applies to all supply licensees)[11]	Broadening requirements for all supply licensees to: • Have sufficient capital and liquidity to meet reasonably anticipated liabilities as they fall due; • Ensure that were they to exit the supply market, licensees' operational and financial arrangements support an exit that results in minimised mutualised costs;

[11] Decision on Strengthening Financial Resilience | Ofgem.

	• Ensure that they have sufficient control over all material economic and operating assets used and/or needed to run their business; • Report to Ofgem when certain financial indicators (triggers) are hit to the extent they impact the licensees ability to meet financial responsibility obligations set out in their license[12]. Triggers include a reduction in the licensee's access to funds; changes to the licensee's contractual arrangements with counterparties; any change that could have a material adverse effect on the cash position of the licensee; and the CCB cash coverage trigger (see more on CCBs below); • Supply Ofgem with an Annual Adequacy Self-Assessment[13] report on their capital adequacy, their business model, risks and mitigations, evidencing how they are compliant with financial responsibility obligations.
Capital Floor and Capital Target (applies to domestic supply licensees)[14]	• From March 2025, domestic supply licensees must hold a minimum Capital Floor of £0 Adjusted Net Assets. This floor must be maintained at all times; • From March 2025, domestic supply licensees must meet a Capital Target equivalent to £115 Adjusted Net Assets[15] per domestic dual fuel equivalent customer. A licensee can be below the Capital Target, but if so, will need to submit and adhere to a Capitalisation Plan to demonstrate it is on a path to meet the Capital Target; • While our preference is that licensees aim to meet the requirements using equity, licensees are able to use Alternative Sources of capital to meet

[12] Further guidance on reporting requirements associated with Triggers is here: Guidance - Financial Responsibility Principle (ofgem.gov.uk).

[13] Guidance - Financial Responsibility Principle (ofgem.gov.uk).

[14] Decision on introducing a minimum capital requirement and ringfencing customer credit balances by direction | Ofgem.

[15] Adjusted Net Assets is defined as (tangible fixed assets + current assets) – (current liabilities + non-current liabilities) plus any Alternative Sources of Capital approved by Ofgem.

	Capital Floor and Capital Target if they are approved by Ofgem[16].
Renewables Obligation[17] (RO) Ringfencing (applies to domestic supply licensees)	• Ringfencing of Renewables Obligations (RO) receipts attributable to domestic electricity supply volumes; • This obligation can be met by purchasing RO Certificates, protecting funds equivalent to their liability in a RO Credit Cover Mechanism, or a combination of the two, on a quarterly basis.
Enhanced monitoring of reliance on Customer Credit Balances (CCBs), and ability to direct ringfencing of CCBs (applies to domestic supply licensees)	• Trigger that requires licensees to maintain a monthly balance of cash in the bank at a level equal to or greater than 20% of gross CCBs net of unbilled consumption owed to their fixed Direct Debit customers; • Where a licensee is below the Capital Target and/or the CCB Cash Coverage Trigger, or is forecast to be below these triggers in the next 12 months, Ofgem may direct them to ringfence a percentage of CCBs, subject to certain considerations. The "adjustment percentage" for the level of CCB ringfencing would be 100%, unless this is contrary to Consumer Interest[18].

Table 2 – Policy measures Ofgem

[16] Alternative Sources of Capital must meet the criteria specified in the supply licence, and have been approved by Ofgem.

[17] The Renewables Obligation supports the generation of renewable electricity through a system of tradable green certificates called Renewables Obligation Certificates (ROCs). Ofgem, the scheme administrator, issue ROCs to accredited generators for the amount of renewable electricity generated in a given period. Generators sell the ROCs to suppliers or traders, which gives generators a premium in addition to the wholesale price of their electricity. Designated Electricity Suppliers (suppliers) are under an obligation to present a certain number of ROCs to Ofgem or make a fixed payment into a buy-out fund in lieu of each ROC in order to discharge its RO. The cost of the RO to suppliers is passed on to consumers through electricity bills. Supplier defaults manifest as shortfalls in the buy-out fund. The GB schemes feature a 'mutualisation' mechanism which seeks to recover shortfalls once a certain threshold has been reached, from other electricity suppliers, once they exceed a threshold.

[18] We have defined Consumer Interest as the likely impact of any ringfencing on Resilience, Prices, Quality and Standards, and the Low-Cost Transition to Net Zero. Resilience considers the impact of any adjustment on the proportion of the market at risk of failure and the likely Mutualised cost that would result. Fair Prices means the impact of any adjustment on charges for the supply of electricity and / or gas. Quality and Standards relates to the impact of any adjustment on the level of competition, innovation, and customer service in the market. Low-Cost Transition to Net Zero considers the impact of any adjustment on the ability of licence holders to progress towards an energy system which relies on renewable zero-emission sources and facilitates the use of zero-emission technologies.

4.1.3 Monitoring and Supervision

This package of financial resilience measures represents a cultural shift in Ofgem's expectations around risk management and reporting in the retail energy market. Ofgem expects suppliers to be able to demonstrate how they are managing their financial risks and resources and Ofgem looks to supply licensees to identify issues early, and to embed continuous improvement over time.

In November 2023, Ofgem published an open letter to gas and electricity supply licensees[19], setting out how Ofgem is deploying a new supervisory approach to the financial resilience of suppliers to understand and mitigate potential issues

Ofgem created the Financial Resilience and Controls (FRC) Directorate to bring together its financial policy, monitoring and analysis, and supervision expertise. Alongside Ofgem's monitoring and analysis work, the supervising function plays a pivotal role in working with suppliers to understand and mitigate potential issues.

Ofgem is committed to an approach to monitoring and supervision that is risk-based (focused on the areas which pose the greatest risk to consumer interests), proportionate (tailored to the size of the firm and business model and impact of a possible failure on consumers), and forward-looking (to ensure ongoing financial resilience and proactive risk management as the landscape evolves). While Ofgem expects engagement with all suppliers to be ongoing, the frequency and intensity of it for individual suppliers will vary according to those principles.

In addition to the reporting requirements set out above (Annual Adequacy Self-Assessment report and reporting at Trigger Points), Ofgem uses regular data collection to monitor licensees' financial positions, including:

Requests for Information (RFI)
The purpose of the RFI is to monitor core compliance with the Financial Responsibility Principle. These monthly snapshots provide an indicative picture of a supply licensees' business financing and financial and operational risks to achieving business objectives. Examples of indicators covered include access to funds, net assets and liabilities, and CCB levels.

Stress testing
Ofgem launched stress testing as a means of assessing whether suppliers are robust to a range of scenarios, whether through capital cover or risk management. Ofgem provides suppliers with a request for information and guidance, as necessary. Ofgem then undertakes the stress testing on the data provided, tests the results with the supplier and adjusts the findings as appropriate. Both the RFI and Stress Testing are carried out relative to the size and risk of a supplier.

[19] Open letter on transitioning to a supervisory approach to the financial resilience of energy suppliers | Ofgem

Ofgem have set expectations that suppliers should be open and proactive with their regulatory engagement, with Ofgem staff encouraged to visit suppliers at their premises where possible to see first-hand how they deliver. In turn, Ofgem has committed to communicating clearly and openly with suppliers on Ofgem's priorities and the rationale for our judgements. Ofgem has said it will be done via the NRA's dialogue at individual supplier level and more broadly, where sector-wide themes and issues are identified which would be beneficial to share. Ofgem has also committed to reviewing and ensuring, as we emerge from the worst of the gas crisis, that the NRA is collecting and monitoring the right data for our objectives in the most efficient way for licensees and the organisation.

4.2 The Netherlands: Hedging requirements: ACM[20]

4.2.1 Fact box The Netherlands 2023

Number of household customers: 8,300,000
Annual switching rate of household customers (by number of meter points): 12%
Number of active suppliers for household customers: 58 (electricity), 56 (gas)
Total number of active suppliers that exited the household market in 2023: 3
Total number of active suppliers that exited the non-household market in 2023: 3
Number of supplier bankruptcies in 2021, 2022 and 2023: In total 7 suppliers went bankrupt over this period
Number of customers impacted by the bankruptcy of suppliers for 2021, 2022 and 2023: 189,000
Can suppliers apply contract termination fees for fixed-term, fixed-price contracts in cases when household customers terminate their contract prior to the expiration of contract?: Yes
Uptake of contracts by household consumers: 96% market-based fixed price, fixed-term contracts, 4% market-based dynamic price contracts as defined in Directive (EU) 2019/944

4.2.2 Regulatory framework

During the recent energy crisis, the repercussions of inadequate risk management and speculative strategies within the energy sector became glaringly evident. Several suppliers were financially impacted. Their downfall was primarily attributed to their practice of offering fixed contracts to consumers without fully hedging their positions, essentially banking on a decrease in energy prices to turn a profit. However, the sudden surge in energy prices during the crisis forced these suppliers to purchase energy at significantly higher rates, leading to their financial downfall.

In response to this crisis and to fortify the stability of the energy market, the Dutch NRA (ACM) has taken decisive action. Following an external investigation into the oversight of suppliers, ACM has tightened licensing regulations. These revisions include stringent financial assessments and organisational evaluations aimed at ensuring the financial health and risk management proficiency of suppliers.

[20] Source: ACM.

The enhanced rules consist of a financial assessment, wherein suppliers must demonstrate:

1. Positive Equity: Suppliers are required to maintain a positive equity.
2. Positive Solvency: Suppliers must exhibit positive solvency, indicating their ability to meet long-term obligations.
3. Robust Liquidity Projections: Suppliers are mandated to provide liquidity forecasts, including stress testing scenarios such as higher energy prices, increased energy demand, and debtor risk (5% uncollectable turnover in the next 12 months).

Additionally, an organisational assessment has been introduced, focusing on whether suppliers have:

1. Comprehensive Business Plans: Suppliers must present detailed business plans incorporating sound risk management strategies.
2. Qualified Risk Managers: Suppliers are expected to employ qualified risk managers to oversee and manage risk factors effectively.
3. Financial Recovery Plans: Suppliers must devise and submit a financial recovery plan, outlining corrective measures to be taken in the event of failing the financial assessment.

To ensure compliance, existing suppliers will undergo these assessments twice annually. Furthermore, these evaluations have been seamlessly integrated into the standard licensing procedure, becoming an integral part of the regulatory framework. By implementing these stringent assessments, the ACM aims to create a resilient energy market, safeguarding both consumers and suppliers from the adverse impacts of market volatility.

4.2.3 Revision of financial supervisory framework

4.2.3.1 Hedging rules

In addition, ACM reviewed its financial supervisory framework during Q1-Q3 2024 and introduced hedging rules. Before providing details about the hedging rules, the following aspects are described:

- Types of risks;
- Types of energy contracts
- Market structure
- Hedging strategies

ACM defined some major **types of risks**:

Market risk:
Market risk in the energy sector refers to potential financial losses due to fluctuations in market prices of energy commodities such as oil, gas and electricity. These price changes can result from various factors, including supply and demand dynamics, geopolitical events, regulatory changes and market speculation. This can lead to cash flow problems, difficulty in managing operational expenses and potential default on short-term liabilities, affecting the company's operations and financial stability.

Liquidity risk:
Liquidity risk in the energy sector is the risk that a supplier will not be able to meet its short-term financial obligations due to an inability to convert assets into cash quickly or secure funding at a reasonable cost. This can lead to cash flow problems, difficulty in managing operational expenses and potential default on short-term liabilities, affecting the company's operations and financial stability.

Solvency risk:
Solvency risk in the energy sector refers to the risk that a supplier will be unable to meet its long-term financial obligations and sustain operations due to inadequate asset value or excessive liabilities. If a supplier faces solvency issues, it risks bankruptcy or financial restructuring, which can severely impact stakeholders, including investors, employees and creditors, as well as disrupt energy supply chains.

In the Netherlands, there are **4 types of energy contracts**:

Dynamic Contracts:
Prices adjust daily based on market conditions, offering flexibility but higher exposure to volatility.

Variable Contracts:
Prices adjust monthly based on market conditions, providing a balance between flexibility and stability.

Model Contracts:
Prices adjust every six months based on market conditions, offering a structured approach to pricing.

Fixed Price Contracts (1 – 5 years):
Prices are locked for a specified period from one to five years, protecting against short-term volatility but potentially higher long-term costs.

Note: All contract types are fixed for a certain period of time varying from one day to five years.

Market structure

Power Purchase Agreements (PPAs):
Long-term contracts between energy producers and purchasers, providing price stability and investment certainty

Over the Counter (OTC) contracts:
Contracts negotiated directly between parties, offering flexibility in contract specification similar to PPAs. Negative side, higher counterparty risk due to lack of standardisation and regulatory oversight compared to exchange-traded contracts.

Futures Markets:
Standardised contracts traded on exchanges, enabling hedging against future price movements. Contracts vary from 1 month to almost five years, depending on the commodity. Standardised exchange-traded futures are cleared at the clearinghouse of the exchange. Counterparty risk is therefore minimised.

Day Ahead (Spot):
Contracts for next-day delivery, reflecting current market conditions.

Intraday (Spot):
Contract for same-day delivery, allowing for real-time adjustments based on immediate demand.

Balancing Market:
Balance supply and demand discrepancies in real-time, essential for grid stability.

Hedging strategies: delta hedging

Delta hedging originated in the financial sector and is used extensively in derivatives markets, such as options and futures.

After identifying the risk (delta) initially, the delta is hedged in full.
During the contract period, specific variables can influence the delta of the contract. For example, the time to expiration will affect the profile of the delivery consumption portfolio.

For example, the power futures markets are based on "base load" and "peak load" contracts, which do not match the delivery profile of the consumption portfolio. As the time for delivery approaches, the profile of the hedged position must be continuously shaped to match the delivery profile of the consumption portfolio.

This type of delta hedging is unique to the energy sector due to the lack of more specifically profiled products on the exchanges.

The explosive growth of renewable energy in the last five years has introduced new challenges in hedging energy portfolios. Wind and solar power can affect the delta of the consumption portfolio even until the last minute.

This variability is also a reason why balancing costs are rising rapidly for suppliers.

If the supplier miscalculates the expectations for delta hedging, in the power market, the Transmission System Operator (TSO) will hedge for the suppliers to balance the network. This last step of delta hedging carried out by the TSO is called imbalance hedging.

Delta hedging has become more challenging: In the past, when renewable energy was only a small fraction of total energy production, electricity was generated primarily by burning coal and gas. Profiling the portfolio was a much smaller issue because coal and gas can be stored long-term and production can be turned on or off almost at any moment.

Now that renewable energy constitutes a large percentage of energy production, and since renewable energy cannot be easily switched on or off and can suddenly drop due to weather changes, the flexibility of coal and gas as commodities has disappeared in the profiling of energy consumption portfolios.

Moreover, as we aim to phase out gas and coal in the transition to cleaner energy, the share of renewable energy will become even larger, making us more dependent on the variability of the weather.

Solutions could include storage capacity for electricity in the form of batteries or converting electricity into hydrogen using electrolysers, allowing for longer-term storage. As electricity storage improves, there will be less imbalance in the network, as electricity can be switched on or off to match the consumption profile of the portfolio.

Hedging rule

There is 100% back-to-back hedge of contracts sold to customers. The 100% back-to-back hedging not only applies to fixed price products but also to indexed products such as variable, model and dynamic contracts. Temporary deviation is allowed if sufficient financial reserves are maintained. Any deviation from the 100% back-to-back hedge should only be temporary, referred to as "short." This is intended to bridge the time gap between sale and hedging. Sufficient capital must be available to cover this "short" deviation. However, it is important to note that having sufficient capital does not excuse non-compliance with back-to-back hedging requirements.

A three-step approach enhances supervision

1. Q3/Q4-23: Detailed information request from suppliers via a 'hedging template' to clarify back-to-back hedging.
2. Q4-23/Q1-24: Analysis of results, development of internal 'hedging stress testing tool,' and enhancement of supervisory framework, potentially issuing formal letters to outlier suppliers.
3. Q2-24 and beyond: Possible enforcement measures to address persistent excessive market risks among outlier suppliers, including adjustments to regulatory rules if necessary.

ACM adheres to Article 18a by not relying solely on communicated hedge policies.
ACM uses standardised templates to inquire about positions across all product types: dynamic contracts, variable and fixed prices, to both small consumers and businesses.

ACM enquires about contracted delivery volumes per MWh and actual volumes hedged per MWh on the reference date, for short-term and multi-year forwards.
Suppliers with all types of contracts (dynamic, variable price contracts, and fixed) have to report to ACM. They must submit a full position hedging template (currently under review), covering intra-day, day ahead, months, quarters, and years for delivery and hedging volumes. Hedging volumes must cover delivery volumes.

The current frequency of reporting is yearly but will be more frequent in the future. Monthly reviews are for parties under increased supervision. ACM provides suppliers with a hedging template.

In order to hedge, a supplier must enter into a sourcing contract with a sourcing party if the supplier cannot hedge directly on energy exchanges. This contract between the supplier and the sourcing party must have a minimum duration of 12 months. However, this does not mean that the hedge position only needs to cover the next 12 months. The entire position, even if it extends up to 5 years, must be hedged back-to-back using futures contracts.

4.2.3.2 Risk management

Effective risk management is crucial for ensuring the financial stability of suppliers and protecting consumers from fluctuations in the energy market. This section discusses various methods and strategies to manage risks in the energy sector. By applying these risk management strategies, suppliers can better navigate market volatility and maintain financial stability, which is crucial for consumer and investor confidence in the energy sector.

Stress tests

Stress tests are designed to evaluate the impact of extreme market scenarios on the financial health of suppliers. These tests help companies prepare for and respond to unforeseen circumstances.

Liquidity Monitoring

Liquidity monitoring is essential to ensure that a supplier always has sufficient liquidity to meet its immediate obligations. This includes:

For hedging purposes of the contracts made with customers: The following liquidity flows are necessary:

- Guarantee Capital: Guarantee capital must be posted with external sourcing entities if the supplier outsources hedging and procurement;
- Initial Margins: When entering into futures contracts on energy exchanges, initial margins must be posted;
- Variation Margins: Throughout the duration of futures contracts, daily variation margins must be posted if the price movement is contrary to the futures contract. The amount of the variation margin depends on the extent of the price movement, and these are highly correlated.

For purchasing the actual physical delivery of energy: Liquidity is needed to pay for daily physical purchases of electricity and gas.

Liquidity is also needed for other costs in the daily operations: Such as personnel costs and office rent.

Capital Requirements

Capital requirements play a crucial role in strengthening the financial resilience of suppliers. Monitoring and managing the company's equity helps to absorb shocks and provides an additional layer of protection for consumers.

Equity Monitoring: Monitoring the equity of suppliers is essential to ensure there is sufficient buffer to absorb initial risks. When equity is insufficient, risks can be directly passed on to the consumer, leading to higher prices and reduced reliability of supply. Suppliers have to demonstrate that equity is positive at all times.

By addressing these risks and implementing robust hedging and risk management strategies, the energy sector can navigate market volatility and maintain financial stability. This approach not only protects the financial health of suppliers but also ensures a reliable and consistent energy supply for consumers.

4.3 France: Prudential regulation: CRE[21]

4.3.1 Fact box France 2023

Number of household customers: 34,350,000
Annual switching rate of household customers (by number of meter points): 8.3%
Number of active nationwide suppliers for household customers: 53 (electricity), 18 (gas)
Total number of active suppliers that exited the household market in 2023: 7
Total number of active suppliers that exited the non-household market in 2023: 14
Number of supplier bankruptcies in 2021, 2022 and 2023: 5 (4 in electricity, 1 in gas)
Number of customers impacted by the bankruptcy of suppliers for 2021, 2022 and 2023: 32,000 for non-household (0.6% of all sites), 164,000 for household (0.4% of all sites)
Can suppliers apply contract termination fees for fixed-term, fixed-price contracts in cases when household customers terminate their contract prior to the expiration of contract?: No
Uptake of contracts by household consumers: 13% market-based fixed price, fixed-term contracts, 62% regulated fixed-price contracts, 25% Other

4.3.2 Background

The electricity retail market in France is characterised by a large uptake of fixed-price market-based offers and the existence of regulated tariffs. In the household market, termination fees are forbidden, meaning that suppliers face higher portfolio uncertainties, and especially churn rates which need to be included in the analysis.

[21] Source: CRE.

In order to ensure price steadiness and predictability for consumers, some suppliers also propose offers with a contractual commitment to reflect the price of a given upstream and smoothed sourcing strategy. For instance, some suppliers might guarantee to their customers that their sourcing component will follow that of regulated tariffs, meaning that the sourcing price is partly determined by the average market price over the two years before delivery.

It is also worth noting that the main French suppliers are also energy producers. For instance, the incumbent supplier EDF is free to use a share of its nuclear plants for its clients' consumption. Other suppliers have already contracted significant volumes through renewable PPAs, which could be used to hedge sourcing for fixed-price contracts.

More generally, some French suppliers are only part of bigger entities with a wider range of activities, sometimes unrelated to electricity and gas supply. These relationships, which impact the robustness of suppliers, are of paramount importance to contextualise the assessment of hedging strategies.

4.3.3 Main framework

The framework envisioned by CRE was subjected to a public consultation during summer 2024, which should lead to finalisation of the framework and its parameters by winter 2024/2025.

4.3.3.1 Quantitative hedging requirement: the first filter

Every supplier would be required to report annually and for each offer, including a commitment on price or sourcing strategy:

- The composition (resp. consumption) of the portfolio, and supplier's best forecasts on its evolution;
- The volumes hedged to cover the demand covered by the offer.

For each contract type, CRE would define a reference sourcing strategy that the supplier would need to respect, with a small tolerance. The reference strategy for fixed-price offers would require the supplier to hedge at least 97% of customer's consumption forecast on date of signing the contract, including (if no termination fees are applied) a churn rate of 10-15%/year. A compliant supplier would be exempted of additional audits. On the contrary, a supplier below the minimum hedging rate on one of its offers would enter a compliance recovery plan for a few weeks during which the supplier would have the opportunity to bridge the gap and comply with the reference strategy.

4.3.3.2 Financial monitoring

The NRA would additionally roughly assess the financial robustness of suppliers through a single metric, which would be updated at each desk. If the supplier is not able to abide by the compliance recovery plan, the NRA would check whether this metric indicates a reasonable financial health of the supplier:

- If so, the NRA would perform a stress test on prices within the scope of the missing volumes only;
- Otherwise, the NRA would perform a complete stress test of the entity.

A supplier showing insufficient robustness when passing these tests would face sanctions.

4.3.3.3 Sanctions

In this framework, the NRA would publish the results for every single supplier, and thus name publicly the suppliers having an inadequate sourcing strategy or showing insufficient financial strength.

The introduction of financial and administrative sanctions in the framework requires legal evolutions CRE will encourage in the months to come. These gradual sanctions would include legal limitations on new customer acquisition, financial penalties and withdrawal or suspension of supplier license.

4.3.4 Complementary measures

Along with this quantitative framework, CRE envisions additional rules contributing to the long-term resilience of retail market actors, in terms of governance and human resources:

1. Regarding internal organisation, CRE would require conditions for the appointment of executive positions and ask suppliers to create an independent position of risk management director.
2. Regarding internal procedures, CRE would ask suppliers to report on risk management procedures and the role played by governing bodies, especially on the definition of risk limitations and the decision process in case of significant events. In addition, the supplier should itemise risk factors with their respective detection, monitoring and management procedures.

4.4 Flanders (Belgium): Licensing process – Financial monitoring, monitoring of hedging strategies and risk management: VREG[22]

4.4.1 Fact box Flanders 2023

Number of household customers: 2,941,900 electricity access points
Annual switching rate of household customers (by number of meter points): 17.12%
Number of active suppliers: 34 (electricity), 28 (gas)
Total number of active suppliers that exited the household market in 2023: 0
Number of supplier bankruptcies in 2021, 2022 and 2023: In total 2 suppliers went bankrupt over this period
Number of customers impacted by the bankruptcy of suppliers for 2021, 2022 and 2023: 95,000 household customers for electricity and 80,000 for gas
Can suppliers apply contract termination fees for fixed-term, fixed-price contracts in cases when household customers terminate their contract prior to the expiration of contract?: No
Uptake of contracts by household consumers: 18.3% market-based fixed-price, fixed-term contracts, 0.1% market-based dynamic price contracts as defined in Directive (EU) 2019/944, 81.6% market-based variable contracts based on average monthly and quarterly spot prices

4.4.2 Background

Before the energy crisis, almost 75% of consumers had a fixed-price contract. Due to the crisis, suppliers no longer offered fixed-price contracts in 2022. That changed again during 2023, with suppliers offering again (although high) fixed-price contracts. During Q2 2024, more than 75% of consumers had a variable price contract.

In the case of the household and small and medium-sized companies' market, termination fees are forbidden. This means suppliers face higher portfolio uncertainties, and especially churn rates which need to be included in the analysis.

4.4.3 (Financial) supervision through the granting and monitoring of the supply license

The supply of electricity and natural gas to customers, via the distribution network or the local electricity transmission network, is subject to the prior granting of a supply license by VREG. To be granted a supply license, certain conditions must be met. Specifically, the candidate supplier must prove to:

i. have sufficient financial and technical capacity to supply;
ii. have sufficient capacity to meet the needs of customers (both for electricity and natural gas);

[22] Source: VREG.

iii. meet a number of professional reliability requirements;
iv. be legally independent from system operators.

The relevant provisions of the Flemish Energy Act of 8 May 2009 and Decision of the Flemish Government of 19 November 2010 (regional energy legislation in Flanders) list a number of documents (e.g., annual accounts, turnover over the last three years) that can "inter alia" serve to demonstrate compliance with the listed conditions, but in principle, VREG itself can decide how and on the basis of which information the assessment is made. The prospective supplier is obliged to fully cooperate. A specific procedure in the Decision of the Flemish Government is followed when granting a supply license.

Once a supplier ("holder of a supply license") is granted a license, it must continue to fulfil all the conditions listed, including those relating to financial capacity. To allow VREG to check this, the supplier has to report every year and there is also an obligation to immediately submit important new information on this subject to VREG.

To assess financial capacity, VREG asks for, among other things:

- the most recent rating report from, for example, Moody's, Standard & Poor's or Fitch, if the company has such a rating;
- the company's annual accounts and annual reports for the last two financial years, with the balance sheet, income statement and notes;
- a copy of the auditor's signed certification on the listed annual accounts;
- a note with the valuation rules applied, if those valuation rules are not included in the annual report;
- a business plan and financial plan containing, inter alia, the following information:
  - a detailed description of the source of the company's financial resources (equity and debt), including future investments and financing needs.
  - a cash flow plan at least on a monthly basis demonstrating that, under the assumptions of the business plan, the company has sufficient resources to meet its obligations at all times;
  - a prospective financial statement and balance sheet for at least the next three years with, if applicable, a distinction between the supply business and any other business of the company.

4.4.4 Annual follow-up of supply license holders

After a supply license is granted, VREG continues to follow up each supplier. Articles 3.2.15 to 3.2.17 of the Energy Act contain some relevant rules in this respect.

All suppliers must submit a follow-up file to VREG at least once a year. In this follow-up file, VREG requests an update of all documents from the application file. On this basis, VREG checks whether the licensed supplier still meets all legal conditions described in the Decision of the Flemish Government of 19 November 2010. The supplier must have e.g., sufficient financial and technical capacity to ensure the supply of electricity or natural gas to its customers. For recently licensed suppliers, this examination is done more frequently than once a year. VREG requests quarterly or half-yearly financial figures, for example an update of the financial plan and a cash flow forecast for the next 12 months.

4.4.5 Strengthening of the monitoring of suppliers since the energy crisis – part of the licensing procedure

4.4.5.1 Follow-up grid fee payments and guarantees to grid operators

VREG started a systematic consultation with the Distribution System Operators (DSOs) to follow up the energy crisis properly. The main purpose is to catch signals as early as possible of market players in difficulty. The DSOs monitor the payment of grid fee bills by suppliers more closely and report to VREG on a monthly basis. Should there be any delayed payment of a supplier, VREG can follow up the causes and assess whether it is temporary or has a technical cause, for example.

At VREG's request, the DSOs also have to report quarterly on the follow-up of set guarantees by suppliers under the access contracts. There are five types of guarantees in the access contract:

- Rating
- Parent company guarantee
- Fulfilment of 4 types of financial ratios
- Bank guarantee
- Cash guarantee

4.4.5.2 Additional reporting by suppliers

Following the increased energy prices in the wholesale markets from end of summer 2021, VREG decided to have individual interviews with all active suppliers in both autumn 2021 and 2022 to briefly monitor the situation. We questioned the suppliers on how they would react to the increased prices, whether they had sufficient liquid resources to bridge winter and what measures they planned to take to control their financial and business risks.
Since the energy crisis, VREG asks suppliers to report yearly on the following:

- A detailed cash flow statement by month for the period May 202x-April 2024x+1 including an explanation of the financing that will be provided for months with negative cash flow;
- A description of the purchase and hedging strategy: how do the suppliers purchase their electricity and natural gas, and how do they hedge against rising or falling prices;
- A description of the main risks to the financial and operational position:
  - Market risks due to volatile prices, margin calls, volumes or customer numbers;
  - Debtor risks due to non-payment or late payment by customers;
  - Counterparty risks due to non- or incomplete fulfilment of obligations by counterparties;
  - Liquidity risks resulting from insufficient cash to meet payment obligations;
  - Operational risks resulting from day-to-day operations, including forecasting of volumes and ICT risks;
  - Risks resulting from activities other than the supply of gas or electricity;
  - Other risks.

- The measures to mitigate the above risks, and to what extent these measures were effective; and
- The percentage of 'bad debt' over year x-1 and the evolution of this percentage compared to previous years and compared to the years before the energy crisis.

From 2024, suppliers serving households will have to report monthly data about non-payment of their customers. These include the following figures:

- The number of notices of default sent;
- The number of started payment plans;
- The average outstanding debt and monthly payment behaviour; and
- The number of cancelled supply contracts

In this way, VREG monitors customers' payment behaviour and the potential default risk a supplier faces.

Since the energy crisis, VREG regularly checked whether suppliers had outstanding debts with the National Office for Social Security, VAT and other tax administrations. From 2024, we will check this on a quarterly basis.

VREG also uses specialised software to check the credit score of all suppliers. Through this credit score, VREG maps out the creditworthiness and risk profile. This research will be done every six months from 2024 onwards.

4.4.5.3 Publication of a yearly report

VREG publishes a yearly report on the financial situation of active suppliers in Flanders (based on the public annual accounts) and mainly focusses on liquidity, profitability, solvency and cash management: https://www.vreg.be/nl/document/rapp-2023-21

4.4.5.4 Main insights

Regarding the above, the main insights would be as follows:

- Suppliers have to provide signed agreements with sourcing parties, Balance Service Providers (BRPs) and shippers;
- Suppliers give a description of their sourcing and hedging strategy, but there are no hedging requirements for the moment; and
- There are no minimum capital requirements for the moment, but VREG benchmarks between similar suppliers and asks for additional capital or subordinated loans or guarantees (e.g., a parent company guarantee).

The current mechanism in place does not yet comply with Article 18a but shows that the monitoring of financial data, hedging requirements and risk management can be a part of the licensing procedure and be included in the formal yearly follow up of suppliers. At the time of publication of this paper, changes in legislation in Flanders were still ongoing.

4.5 Sweden: Retail competition and access to hedging bypass the need for hedging requirements: Ei[23]

4.5.1 Fact box Sweden 2023

Number of household customers: 4,740,705
Annual switching rate of household customers (by number of meter points): 10%
Number of active nationwide suppliers for household customers: 65 (electricity), 0 (gas)
Total number of active suppliers that exited the household market in 2023: 9 (4 suppliers have left the market due to bankruptcy and 5 suppliers have merged with other suppliers or had a shift in ownership)
Number of supplier bankruptcies in 2021, 2022 and 2023: No data available for 2021, 10 suppliers went bankrupt in the period 2022-2023
Can suppliers apply contract termination fees for fixed-term, fixed-price contracts in cases when household customers terminate their contract prior to the expiration of contract?: Yes
Uptake of contracts by household consumers: 14.3% market-based fixed-price, fixed-term contracts, 13.6% market-based dynamic price contracts as defined in Directive (EU) 2019/ 944, 54.4% market-based variable contracts based on average monthly spot price

4.5.2 How suppliers hedge fixed-term fixed-price contracts today

Suppliers' choice of hedging strategies is currently not regulated in the Swedish electricity market. Hedging the production side of a fixed-term fixed-price contract can be done in multiple ways, for example by trading power futures on organised market platforms, through bilateral agreements or by vertical integration where the supplier has access to its own production.

On the consumption side, suppliers typically use termination fees as a part of the contract with consumers to ensure that the contracted volumes for production can be paid for throughout the duration of the hedging product. The termination fees cannot be higher than the supplier's expected loss in relation to the hedging products. Using predatory termination fees as a way to increase profits is not allowed. As the contracts with consumers are typically fixed-price for the entire consumption during the contract period, the total volume as well as the expected cost of deviation from the power future's baseload profile will need to be estimated and added as a risk premium.

Hedging strategies are considered an important part of market actors' business strategies and are therefore normally confidential. However, the energy crisis showed that the market handled risk in a responsible manner, as supplier defaults are rare and fixed price consumers have not been paying more than the agreed upon price even during the highest price spikes. By using data from the independent price comparison tool Elpriskollen.se one can also see that fixed price offers were available in the market throughout the crisis.

[23] Source: Ei.

4.5.3 How new hedging requirements (Article 18a) will impact suppliers

Imposing hedging requirements in the Swedish market needs to be done with great care. As the fixed-price market is seemingly working well and no major market failure has been identified, there is a risk of introducing a regulatory failure instead, which could unduly distort the market. If the supplier risk management rules cause suppliers to under-hedge, the risk of supplier default would increase, whilst a framework causing suppliers to over-hedge would lead to unnecessarily high-risk premiums.

Hedging strategies vary between suppliers. Imposing a requirement would distort the market in the sense that some suppliers will be forced to hedge more than necessary based on their hedging strategy, which comes at a cost that is transferred to final consumers.

Instead, securing competition among suppliers and access to hedging indirectly guarantees not only a broad offer of contracts, including fixed-price contracts, but also the optimal amount of hedging. In a competitive setting, suppliers constantly optimise costs and benefits. These costs may vary depending on whether the electricity is purchased from the wholesale spot market, hedged in the forward markets, bilaterally, or whether the supplier has access to its own production. Suppliers could partially hedge to cover their customers' fixed price contracts, but also to maximise their profit regardless of their fixed-price contracts. For example, suppliers may choose:

1) Risk-averse supplier: Hedge the estimated volume of fixed-price contracts that minimises exposure to wholesale prices.
2) Risk-seeking supplier 1: Do not fully hedge the estimated volume of fixed-price contracts on the expectation that the spot price at which they will purchase electricity to resell will be lower than the price they get from their fixed-price contracts. In other words, they expect to profit from the risk premium paid by final consumers provided that the spot price for which the supplier purchase electricity is lower in the future.
3) Risk-seeking supplier 2: Hedge more than the estimated volume of fixed-price contracts. In other words, the supplier may choose to hedge some part of the volume that will be sold in variable or time-based contracts where the risk-premium relapses entirely to the consumer. This scenario is on the expectation that the hedged price is lower than the spot price from which the revenue will come.

Given this variety of strategies, which may also change over time, it is extremely challenging to determine a standard level of hedging from which the requirement in Article 18a is based. Instead, the Swedish case study shows that retail competition and access to hedging are key elements to guarantee the supply of fixed price contracts and the optimal amount of hedging.

One risk of not having hedging obligations or provisions to publicly disclose hedging strategies might be that consumers have less information to distinguish financially responsible suppliers from short-sighted companies engaging in hit-and-run strategies. These companies focus on maximising profits in the short run, do not hedge any consumption and do not care about potential bankruptcy. The fact that defaulting suppliers has remained rare through the energy crisis suggests that this risk is not substantial. There are also voluntary and independent certification schemes which suppliers can sign up for in order to signal financial responsibility to consumers. Another deterrent from this kind of business practice is the Swedish Electricity Act, which states that termination fees should reflect the direct loss made by the supplier. As suppliers that do not hedge would not be able to show any losses made in the hedging market, they would not be able to charge a termination fee. In this case, consumers could just switch contract if the market price goes down, lowering the expected profits from this kind of short-sighted strategy.

4.5.4 Implementation of hedging requirements

In Sweden, as in other Member States, it is the central government who oversees the assessment and implementation of Article 18a.

Monitoring requires a continuous evaluation not only of hedging opportunities but also of retail competition. The evaluation of hedging opportunities could be similar to the assessment done for cross-border hedging opportunities, but with a special focus on suppliers.

It is important that the assessment identifies the hedging need. Otherwise, there is a risk of misinterpretation in cases of observed declining hedging volumes. For example, if the demand for fixed-price contracts declines because consumers find other types of contracts more attractive, the need for hedging volumes also declines accordingly. In this case, less volumes do not necessarily call for stricter hedging requirements under the proposed Article 18a. This example is further evidence that one of the key challenges of implementing Article 18a is to define the right level of hedging.

Rather than aiming for a hedging requirement, the assessment should focus on the need and actions for providing suppliers the tools for efficient hedging. As mentioned above, suppliers could hedge in different ways. Bilateral hedging has a disadvantage, which is that the prices are not necessarily transparent for all market participants and counterparty risk management is entirely borne by the parties. On the other hand, promoting suppliers' access to hedging through exchanges has the advantage of providing transparent price signals and counterparty risks are managed through clearing houses. Transparent price signals from the forward markets also help facilitate efficient investment decisions.

Another challenge for monitoring is to get reliable hedging data from suppliers as these figures are often part of their business strategy. Confidentiality and non-disclosure provisions will be necessary so suppliers could feel confident to share hedging data with the authorities in charge of monitoring.

4.5.5 Summary

Ei pleads for a light regime, which can be in line with Article 18a. At the time of publication of this paper, changes in legislation in Sweden were still ongoing.

4.6 Germany: "Hedging as it is practiced in Germany": BNetzA[24]

4.6.1 Fact box Germany 2023

Number of household customers: 49,636,051
Annual switching rate of household customers (by number of meter points): 12%
Number of active nationwide suppliers for household customers: 197 (electricity), 142 (gas)
Total number of active suppliers that exited the household market in 2023: 20
Number of supplier bankruptcies in 2021, 2022 and 2023: No data available
Number of customers impacted by the bankruptcy of suppliers for 2021, 2022 and 2023: not available
Can suppliers apply contract termination fees for fixed-term, fixed-price contracts in cases when household customers terminate their contract prior to the expiration of contract?: Yes
Uptake of contracts by household consumers: 99% market-based fixed-price, fixed-term contracts, 1% market-based dynamic price contracts as defined in Directive (EU) 2019/944

4.6.2 Background information

In Germany, there are more than 1,400 electricity and 1,100 gas suppliers, supplying 49.9 million and 129 million final electricity and gas customers respectively. There are approximately 770 electricity and 653 gas suppliers of last resort or default suppliers.

4.6.3 Why do we need hedging requirements?

In general, hedging is an instrument to avoid the following scenarios:

- bankruptcy of suppliers;
- too high and fluctuating energy prices for consumers;

[24] Source: BNetzA.

4.6.3.1 Hedging against bankruptcy of suppliers

So far, every supplier is responsible for its own hedging strategy in Germany. If a supplier goes bankrupt, the supplier of last resort (SoLR) mechanism in Germany prevents consumers from experiencing an interruption of energy supply. A SoLR is a supplier that supplies most household customers with electricity and/or gas in the local network area. Which SoLR supplies most households is determined every 3 years. In case of bankruptcy, the SoLR must take over the customer of the former insolvent supplier. In the first step the supply by the SoLR runs during maximum 3 months and a change of supplier is possible at any time. It is not necessary to conclude a contract. If a consumer has not changed the supplier within this time, they will be transferred to a different contract with two weeks of termination notice.

During the energy crisis, as well as before, several German suppliers went bankrupt, some of whom had more than 100,000 consumers. In all cases and at all times, the SoLR system remained stable.

The mechanism is illustrated in the following picture:

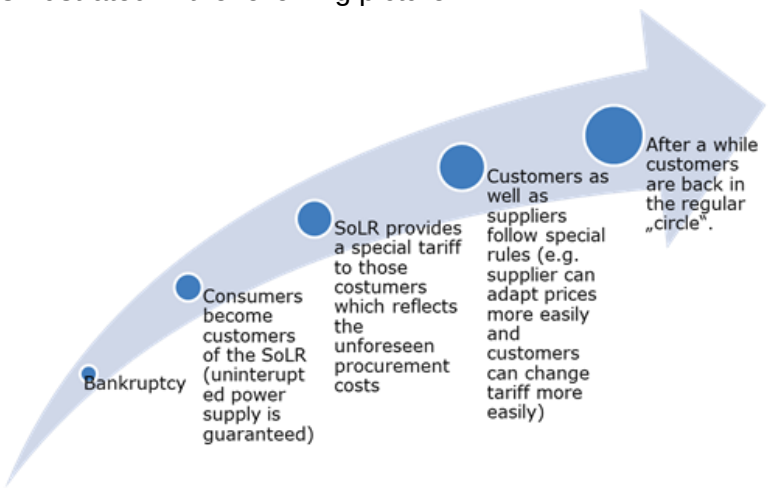

Figure 3 – SOLR mechanism in Germany

4.6.3.2 Hedging against high and fluctuating energy prices for consumers

As long as consumers can switch to different suppliers, each individual consumer does not have to be protected from price fluctuation. Only those who cannot afford high energy prices (vulnerable customers) need this special “support”. In Germany, vulnerable customers are all customers who receive social support in general. This support includes, among other things, (e.g., residential allowance, lunch allowance, etc.) an energy grant and energy consultancy services.

4.6.4 Final conclusion

German customers are protected against the loss of energy supply and those who cannot afford high prices are hedged by the social system.

Further financial hedging might lead to higher prices for all customers since every standardisation implies less competition and might act as a market entry barrier to those suppliers who cannot fulfil the requirements. Therefore, any further hedging mechanism does not automatically improve the situation. Moreover, considering the number of suppliers in Germany, a hedging mechanism or stress test system would require a huge amount of resourcing.

Currently the German legislator is thinking of a hedging mechanism which preserves competition between suppliers but also minimises the risk of supplier bankruptcy so that consumers can still profit from lower prices due to different procurement strategies. At the time of publication of this paper, changes in legislation in Germany were still ongoing.

4.7 Portugal: Risk and collateral regulatory framework in electricity and gas systems: ERSE[25]

4.7.1 Fact box Portugal 2023

Number of household customers: 6,417,890
Annual switching rate of household customers (by number of meter points): 14%
Number of active nationwide suppliers for household customers: 34 (electricity), 20 (gas)
Total number of active suppliers that exited the household market in 2023: 0
Number of supplier bankruptcies in 2021, 2022 and 2023: 6 (including 3 that voluntarily opted out of the market in line with extraordinary measures applied by ERSE during the crises)
Number of customers impacted by the bankruptcy of suppliers for 2021, 2022 and 2023: 15,205 in electricity (including 5 246 from the mentioned voluntary opt out) and 1,197 in the gas sector (including 142 from the mentioned voluntary opt out)
Can suppliers apply contract termination fees for fixed-term, fixed-price contracts in cases when household customers terminate their contract prior to the expiration of contract? Yes
Uptake of contracts by household consumers: 84.3% market-based fixed-price, fixed-term contracts, 1.3% market-based variable contracts based on average monthly spot price, 14.4% regulated fixed-price contracts

Following the bankruptcy of three electricity suppliers in 2017/2018, Portugal implemented a risk and collateral regulatory framework for electricity in 2018, which was extended to gas in 2021.

[25] Source: ERSE.

Due to the measures taken in Portugal, including the risk and collateral regulatory framework in the electricity and gas systems, as well the revenues introduced in the national electricity system resulting from the surplus coming from contracts for differences (CfD) with renewable producers, in 2021, 2022 and 2023 only three small suppliers (electricity and gas sectors) went effectively bankrupt. The number of customers impacted was limited to less than 10,000 in electricity and about 1,000 in gas. Another 3 suppliers requested, as a precautionary measure and in accordance with the aforementioned emergency measures, that their clients be transferred to the SoLR. This measure affected about 5,300 clients in electricity and less than 300 in gas.

4.7.2 Framework

Portugal implemented a risk and collateral regulatory framework for electricity in 2018, which was extended to gas in 2021.

This regulatory framework ensures that the following responsibilities of market operators towards the regulated companies are guaranteed:

a. Responsibilities arising from the conclusion and implementation of network use contracts with network operators;
b. Responsibilities arising from the conclusion and implementation of contracts concluded within the scope of membership in the electricity and gas balancing markets.

Self-consumers, energy communities and regulatory sandboxes projects are exempted from these requirements.

The general principles of the risk and collateral management framework are:

- Integrated risk and collateral management (lower exposure to systemic risk) at two levels: (i) between activities in the same sector; and (ii) with a combined assessment of the electricity and gas markets;
- Integrated and professionalised risk and collateral counterpart: more efficient operation in terms of administrative and financial costs borne by market agents, also reducing barriers to market participation;
- Prudential rules to minimise risk exposure: with pre-default measures activated to reduce risk exposure (e.g., suppliers with unpaid third party access (TPA) or ancillary services costs are prevented from building up their portfolio in order to contain the risk);
- Collateral fund mechanism: the fund coexists with an individual collateral component (that represents the major part of the collateral provided by suppliers) and promotes cohesion in systemic risk management;
- Differentiation of risk by agent according to their profile and actions: it discriminates positively for market agents with a history of compliance; and
- Different types of collateral: diversity allows flexibility in the presentation of collaterals and lower dependence on the financial sector (depending on market actor’s decision) possibility to provide real assets as collateral (namely stored gas in the gas sector).

ERSE is studying the introduction of stress tests. At the time of publication of this paper, changes in legislation in Portugal were still ongoing.

4.8 Spain: CNMC[26]

4.8.1 Fact box Spain 2023

Number of household customers: 29,310,077
Number of active nationwide suppliers for household customers: 238 (electricity), 156 (gas)
Annual switching rate of household customers (by number of meter points): 21%
Total number of active suppliers that exited the household market in 2023: 27
Total number of active suppliers that exited the non-household market in 2023: 23
Number of supplier bankruptcies in 2021, 2022 and 2023: 14 electricity and 6 gas suppliers were disqualified during this period
Number of customers impacted by the bankruptcy of suppliers for 2021, 2022 and 2023: 9,030
In gas, the number of consumers forced to search for a new supplier or moved to the 4 gas SoLR (if they did not choose a new supplier) by disqualification of gas suppliers was 7,600 gas customers in 2021, 3,300 customers in 2022 and 0 customers in 2023
Can suppliers apply contract termination fees for fixed-term, fixed-price contracts in cases when household customers terminate their contract prior to expiration of contract? Since 2002, no fees are applied provided that the consumer notified the supplier at least 15 days prior to the beginning of the extension of the contract (which is generally for an annual period). However, if such a termination occurs during the first year of the contract, entailing an economic loss for the supplier, the termination fee cannot exceed 5% of the contract price for the estimated energy remaining to be supplied.
Uptake of contracts by household consumers: 71% market-based fixed-price contracts, 29% market-based dynamic contracts as defined in Directive (EU) 2019/944

4.8.2 Current regulation

In Spain, suppliers do not have to obtain a license or an administrative authorisation. Instead, suppliers notify the start of their activity to the Ministry declaring compliance with the established requirements.

The necessary **requirements** to carry out supply activities, determined by the Government, are accreditation of:

- Legal capacity: electricity suppliers must be registered in the registry and their Articles of association should state that they can buy and sell electricity without any limitations on this activity. They must also certify that they comply with the separation of regulated and non-regulated activities.
- Technical capacity: they must comply with the requirements and rules set by the system and market operators to participate in the generation market.

[26] Source: CNMC.

- Economic capacity: they must present to the system operator and the market operator the guarantees required for the purchase of energy on the market. The payment of grid access tariffs and charges is also a requirement of economic capacity.

The purchase of energy for consumers on the market is both a technical and economic capacity requirement, verified through the monitoring reports of the system operator.

If a supplier fails to comply with any of the requirements, the Ministry may disqualify the supplier and transfer the customers to a SoLR.

Besides, suppliers must comply with some obligations including:

- Contract and pay the tariff access to the transmission and distribution networks.
- Suppliers with a sales volume of more than 45 GWh/year must submit to the CNMC their annual accounts, as well as accounting information every quarter.

In addition, suppliers are required to fulfill several obligations, including:

- Contracting and paying the access tariff for transmission and distribution networks, and
- Submitting annual accounts and quarterly accounting information to the CNMC for suppliers with an annual sales volume exceeding 45 GWh.

Suppliers that do not comply with any of the obligations may be sanctioned (by the Ministry or by the CNMC, depending on who has the competence over the subject), and the commission of a very serious infringement may lead to the disqualification of the supplier.

Given the requirements and obligations, suppliers do not have to be hedged when offering fixed-price products to consumers.

In the natural gas sector, there is a guarantees system for all suppliers covering balancing obligations and TPA tariffs. In total, for all gas suppliers, there is a deposit of around €700 million covering gas balancing obligations, and €1,400 million covering the payment of TPA contracts (regasification, transport, distribution and storage). Individual guarantee obligations for a supplier are recalculated in a daily base, in proportion of the size of the supplier (volume of TPA contracts and balancing) and will cover any non-payment. If the supplier does not meet its guarantee obligations, the supplier is disqualified from supplying natural gas in a short time.

4.8.3 Measures adopted during the crisis

The electricity price hike during the energy crisis led to a Royal Decree-Law published in September 2021, extending electricity suppliers' obligations to send the CNMC the information corresponding to the electricity forward contracting instruments that they have subscribed to, both physical and financial, as well as any other type of purchase transaction.

In the case of companies belonging to the same business group, the experience of the crisis showed that it is more relevant to monitor the supply contracts of their customers than the contracting instruments between the companies of the group. This made monitoring the impact of emergency measures in these companies a major challenge during the crisis.

In addition, the non-payment of required guarantees by suppliers (calculated on the basis of imbalances due to differences between their consumers' consumption and the purchases made in the wholesale market) significantly increased during the crisis. The CNMC modified the operating procedures to better adjust the calculation of guarantees with the most accurate consumption information available and allowed the system operator to identify early on the lack of sufficient electricity purchases in the market. Therefore, suppliers are monitored from the very beginning of their activity to detect if they are not buying enough energy for their consumers before the first settlement of measures is available.

4.8.4 Implementation of other measures

Monitoring hedging strategies in Spain (for instance hedging based on forward contracts) would be a very complex task due to the large number of active suppliers existing in the country, which makes it difficult to monitor each of them individually.

As mentioned before, the current system of guarantees presented to the market and system operators to participate in the electricity market protects the rest of the market participants in case of supplier failure. However, this system might not be sufficient if a supplier does not pay (further its guarantees) and it continues supplying consumers (and, in some occasions, without purchasing energy in the market).

In a draft Royal Decree on electricity supply and contracting conditions currently under public consultation, the Government plans to introduce new requirements and obligations. Suppliers will have to provide guarantees to the network operators (in addition to those existing guarantees to the market and system operators). Additionally, electricity suppliers will have to comply with a sufficient social capital and well-qualified human resources with the necessary knowledge and training for the development of the activity.

In the natural gas sector, the current system of gas guarantees works well, protecting users and the gas system in case of bankruptcy of gas suppliers, and there is no plan to change it.

At the time of publication of this paper, changes in legislation in Spain were still ongoing. CNMC participates in this process.

5 Key considerations and guidance for implementation

Prudential regulation aims to strengthen the resilience of suppliers on the market. The EMD Directive leaves it up to the competent authority to define the prudential tools they deem to be the most appropriate, while offering the option of adapting these tools to the specific characteristics of the national market. It is also up to the competent authority to develop an enforcement framework.

5.1 Inspiration from the banking and insurance sector

Taking into account the practices in the banking and insurance sector, Member States can act on the surveillance of suppliers' practices which could be at the root of failures that may affect final consumers (through reporting requirements on risk management and governance, or hedging requirements), as well as the financial consequences of these practices on suppliers (through stress tests or monitoring financial ratios). CEER encourages energy authorities in charge of prudential regulation to cooperate or exchange expertise with their counterparts from other countries but also from the banking and insurance sector.

The scale at which mechanisms should be normatively defined differs between the three sectors: a standardised European prudential mechanism for energy would not be effective to tackle the specific issues faced by each Member State. However, in the case of international supply companies, coordination between countries would be a useful tool to identify risk-bearing companies, thanks to the disclosure between authorities of suppliers facing financial issues or adopting reckless strategies locally. CEER encourages coordination between national competent authorities with regard to transnational suppliers. If assessments conducted nationally on these suppliers show serious breaches, the national competent authority could warn its counterparts from other Member States where the supplier is based, thus triggering an unannounced assessment within these markets. Such a practice would improve the reactivity to contain the spread of these breaches and their consequences on national markets. Collaboration between competent authorities and local financial authorities could also prove relevant, if needed.

Policy makers have also decided to place an emphasis on the transparency of actors towards the market as an additional leverage to foster better practices in the banking and insurance sectors, under the additional pressure of customers and investors. Competent authorities could use this additional soft regulation through enhanced communication on robustness metrics (results of stress tests, fulfilment of guidelines to assess hedging strategies etc.) associated with the prudential mechanism they envision for suppliers.

Article 18a of the EMD Directive is designed in response to a substantial crisis and the first mechanisms designed for its transposition will show room for improvement. Thus, national frameworks should aim for the continuous improvement of the mechanism, which is an essential component of its effectiveness and up-to-dateness given market evolutions. For instance, enhanced flexibility should be given by Member States to competent authorities in the definition of parameters for quantitative analysis, and reporting content requirements (required data as well as templates). CEER also highlights that a balance is to be found between an agile and a stable mechanism. Competent authorities need to adapt the rules to the market evolution but also need to give enough time to suppliers to adapt to the mechanism.

Partly delegating the workload, for example regarding quantitative analysis, could allow competent authorities to partially compensate for the workforce asymmetry often observed, though such a practice should be complemented by unannounced audits from regulatory authorities to check the rigour of the approach. For instance, the competent authority could delegate stress tests to suppliers but only if the underlying scenarios on price, temperature, and consumptions are specified in advance by the authority.

The pillar of qualitative assessment of governance and risk management tools should not be neglected by Member States in the transposition of Article 18a, as breaches detected through quantitative regulation can be symptoms of a broader breach in the way the entity handles risks, or on the quality of information flow, decision reactivity and competence of decision makers.

5.2 Toolbox – different tools to implement Article 18a

Article 18a defines the principles to ensure suppliers are appropriately hedged when offering fixed-price contracts. The EMD Directive gives room for competent authorities to implement the most suitable mechanism according to national specificities.

In the following sections, CEER provides a toolbox outlining possible mechanisms an NRA can define when implementing prudential regulation mechanisms. Prudential rules may involve the cumulative or non-cumulative use of the following tools:

- Hedging requirements;
- Stress tests;
- Financial obligations (minimum capital, financial guarantees, etc.) and monitoring of financial indicators and reports; and
- Risk assessment and risk management strategies.

Regardless of the tools chosen, the burden of proof should be on the supplier as to the soundness of its hedging strategy given its hedging needs, its financial situation, its capitalisation and its type of hedging instruments (e.g., access to own generation).

5.2.1 Hedging requirements

There is no one-dimensional metric of “hedging performance”, allowing to rank the strategy as appropriate or not. However, the objective of Article 18a is not to define a perfect hedging strategy, but to control whether the supplier’s strategy seems robust, which is for the supplier to demonstrate. For that purpose, it is possible for competent authorities to define a reference hedging strategy where sourcing on the market reflects contractual commitments to consumers (thus minimising the spread causing the risk). This strategy could be used as a standard from which suppliers could deviate by +/- X%, or more generally as a basis for the establishment of criteria to follow up and evaluate suppliers’ hedging strategies.

When implementing hedging requirements, lessons can be shared from quantitative hedging requirement mechanisms already in place or existing studies on the following topics:

- Method of monitoring;
- Market specificities to be taken into account;
- Reporting frequency; and
- Reporting method.

These learnings are discussed in detail in the following sections.

5.2.1.1 Method of monitoring

The monitoring of energy supply can be assessed financially (‘in value’), or on the basis of volumes still to be covered (‘in volume’). Since the aim of prudential regulation is to ensure that the volumes subject to a contractual commitment on price or supply pattern are covered, the assessment “in volume” of the suppliers’ commitments’ coverage is a relevant monitoring tool. Surveillance of quantitative hedging requirements could simply be to ensure the symmetry between contract cover and the contractual commitments to the customers.

If a 'minimum hedging level' was set, this level would have to ensure both effectiveness regarding the reduction of bankruptcies and their consequences on consumers, and equality of treatment, by taking into account, when necessary, the specificities of suppliers.

Competent authorities could decide to accept open positions, under well-defined financial conditions ensuring without any doubt the robustness of the supplier in case of a crisis.

Such a hedging requirement would thus enable national authorities to prevent cases of under-coverage hindering suppliers from meeting their contractual commitments in the event of an increase in market prices. Under-hedging should be targeted as a priority, as suppliers naturally have less incentive to over-hedge for most of the offers they make, and several tools such as termination fees and consumption commitments from large consumers already limit the extent of over-hedging recorded (see also 5.4.1).

5.2.1.2 Market specificities

Market specificities that can be taken into account, amongst others:

- Consumer segments and termination fees;
- Types of contracts;
- Types of hedging instruments; and
- Level of competition.

We discuss these in detail in the following sections.

Consumer segments and termination fees

CEER recalls the different needs between large/medium-sized consumers and mass market consumers which should be reflected in the prudential regulation mechanism to be implemented.

For large and medium-sized consumers: the prudential obligation could directly reflect suppliers' contractual commitments to their customers and the associated market transactions. In particular, consumers in this segment often make firm commitments and are subject to termination charges in the event of breach of contract. For these consumers, full coverage of consumption according to the terms of the contract's price commitment (or price formula) seems to be an adequate criterion.

For mass market consumers: the supply strategy is based on a statistical analysis of the portfolio. The prudential obligation should take into account the uncertainties that weigh on the evolution of the portfolio. The regulation should leave room for suppliers having hedged “back-to-back" given their best estimate of portfolio consumption and the liquidity constraints, to refine their positions “of-the-river"[27] as the predictions and the granularity of liquid products get finer.

Within the mass market, NRAs should also distinguish the analysis between offers with and without termination fees in the supply contract. In the absence of termination fees, the supplier faces an additional risk of churn. An annual churn rate could be included in the forecast of the consumption load curve for contracts that do not include termination charges. This estimated churn rate could either be determined by the NRA or provided by the supplier under control of NRA (given historical data for instance).

[27] Because of the churn risk and in case of absence of termination fees suppliers do not always have a back-to-back hedging strategy for their household portfolio (B2C supply). A supplier’s household portfolio can be dynamic and can be impacted by elements such as advertising campaigns, temporary discounts, seasonality or temperature, group purchases, etc. To manage these risks, a supplier operating on segments where termination fees are forbidden carries a hedging strategy based on a statistic approach. The supplier has to make statistical forecasts of changes in its portfolio consumption, depending on both portfolio size (sales and termination forecast) and consumer behaviours (for example, driven by temperature). These forecasts are regularly updated, as are the associated energy purchases. The frequency of these adjustments depends on the supplier’s practice, the existence or not of a regulated reference (such as regulated tariffs) and its structure (such as its levelling).

CEER recalls the advantages of termination fees in the context of prudential regulation. These termination fees should abide by Article 12(2) of Directive (EU) 2019/944, a derogation to the prohibition of switching fees is only allowed as long as they do not exceed the direct economic loss of the supplier. Under this constraint, termination fees allow to tackle the over-hedging risk: they serve as a protection against supplier defaults in case of sharp and sudden price falls leading to portfolio erosion, and subsequently the sale of the over-hedged volumes at a loss. There is room for improvement concerning better guidelines on how suppliers could estimate termination fees, as well as the need for prompt and clear communication to final consumers on how termination fees are estimated and charged. For more information, we refer to the CEER report 'Beyond the crisis: report on consumer protection and market measures for better functioning markets'.

Types of contracts

Hedging control can be defined as the assessment of the adequacy between the volumes concerned by a supplier's contractual commitment to its customers at a fixed price or in a supply schedule, on the one hand, and the supplier's actual hedging practices to honour these commitments, on the other. Therefore, CEER considers it relevant to extend the scope of the mechanism to all offers that are the subject of a contractual commitment, limiting the assessment of compliance to the contractual commitment.

Types of hedging instruments

CEER advises asking suppliers to map their entire procurement and hedging strategy with the types of hedging instruments.

These types of hedging instruments include:

- Electricity from physical assets;
- Power Purchase Agreements;
- Over the Counter (OTC) contracts;
- purely bilateral contracts neither traded nor cleared in the exchange;
- futures markets;
- Day Ahead (spot) market;
- Intraday (spot) market;
- swaps; and
- Call options.

The share and role of these instruments in the supplier's hedging portfolio highly depends on the strategy of the supplier. Their risk profile should be assessed qualitatively at least.

In particular, CEER advises taking into consideration that using bilateral contracts without a clearinghouse to hedge has a higher counterparty risk than using power futures at an organised marketplace that is subject to Regulation on Wholesale Energy Market Integrity and Transparency (REMIT) and European Market Infrastructure Regulations (EMIR) requirements. For instance, the rules should foster the use of PPAs as a means of hedging, without turning a blind eye on the aforementioned induced risk. If a minimum requirement of PPAs is introduced, it is advisable that the counterparty risk management and financial viability of the

projects selling the PPAs are taken into account. If a supplier's hedging strategy relies on its 'own production', it should be clear that the physical assets are actually dedicated, either as a hedging instrument or to close open positions and not intended for another activity (contracts signed with external entities for volume or sold on the market). The uncertainties associated to the production of these assets should explicitly inform the supplier's decision.

CEER also advises taking into account the party that hedges. The risk might be transferred from the entity that owns the license (the supplier) to the entity in charge of sourcing, which could be a sister/mother company, or a third-party company. Many suppliers choose to delegate the sourcing to an external entity. The entity then sells volumes to the supplier at a price whose indexation is contractually defined. The supplier wanting to minimise the spread between sourcing price and price commitments towards consumers might replicate these commitments within the contract signed with the entity, but, if so, the risk is just shifted from the supplier to the sourcing entity, whose hedging strategy to respect commitments does not fall within the scope of Article 138a. The behaviour of this entity on the market is a major vector of counterparty risk for the supplier. If the hedging is not done by the supplier, although the hedging responsibility will remain at the supplier level, even if this is outsourced, the NRA can specify some procedures:

- Existing third-party regulation if the company in charge of sourcing is already regulated by another authority (e.g., financial regulation);
- Risk management procedures, a management mandate or a risk exposure limit applicable to the entity in charge of sourcing;
- Compliance with internal operating rules and subject to a regular compliance audit;
- Requirement for entities in charge of sourcing to distinguish accounts between costs and revenues for the supply activity and the trading activity; and
- Requirement for the supplier to identify the counterparty(ies) and carry out a counterparty risk analysis.

Level of competition

CEER further advises taking into account the level of competition. This may be important since in a highly competitive supply market, suppliers can be more prone to take risk to offer the lowest prices. NRAs should be particularly cautious if the most efficient means of price differentiation on their market requires taking inconsiderate risks on the hedging strategy to lower sourcing costs. For the NRA it is important to distinguish between "cost-minimal" strategies and "adequate in terms of risk" strategies.

5.2.1.3 Reporting frequency and method

When introducing hedging requirements, CEER advises thinking about the reporting frequency and method.

The advisable reporting frequency highly depends on the resources of the NRA. A first method could be for the NRA to organise a regular data collection during which all suppliers would submit the necessary deliverables: if so, limiting the frequency to a yearly reporting could be necessary, or the NRA could ask for seasonal reviews as risk profiles borne by suppliers depend on the season. Another relevant method could be for NRAs to compel suppliers to follow the quantitative hedging requirements metrics real-time, so as to be ready at any time for unannounced NRA audits.

The control can be done by ex-ante checks, ex-post checks or both ways. These two controls could be complementary and implemented with different frequencies to ensure that suppliers show compliance on their current and former strategy.

Within most suppliers, there is already a form of internal reporting on hedging. The NRA might decide to accept this existing reporting in the context of its quantitative hedging requirement control, in order to avoid suppliers' duplicate work. In order to manage its own workload, the NRA could choose to ask suppliers to respect standardised templates.

5.2.2 Stress tests

Stress tests can be used to evaluate the impact of extreme market scenarios on the financial health of suppliers or as a means of assessing whether suppliers are robust in a range of scenarios, whether through capital cover or risk management. The stress tests help suppliers to prepare for and respond to unforeseen circumstances.

Stress testing can be an important risk management tool and play an important role in a supplier's strategic risk management and strategic planning.

Stress tests allow suppliers to simulate scenarios of substantial turmoil on the markets and can help the management of the supplier to understand the impact of extreme events on the supplier's financial position such as changing regulations, volatile energy prices or price shocks, extreme weather conditions, etc.

Understanding the variables that drive such scenarios allow suppliers to develop plans to mitigate these risks and to absorb the potential (financial) impact. Equity planning is an example of an area that can benefit from stress testing. Understanding how much equity might be needed to keep the business operating during an unexpected event can help improve the financial capacity of a supplier.

Stress testing can not only play a role in measuring the financial impact from market and credit risk exposures, it can also support the execution of a supplier's corporate strategy. Management can develop an understanding of how business decisions might impact equity. This can support contingency plans for unfavourable or stress test scenarios. With a prescribed set of actions, a supplier's management can respond quickly during periods of substantial turmoil.

Carrying out stress tests can be a demanding and costly administrative process, both for the suppliers and the NRAs, despite the in-depth and reliable analysis it can lead to. Therefore, the scope, the perimeter and the frequency should be carefully determined based on NRA allocated resources and based on strategy, decision and objectives.

Practical example

Quarterly Stress Testing by Ofgem
Ofgem launched stress-testing as a means of assessing whether suppliers are robust to a range of scenarios, whether through capital cover or risk management. Ofgem provides suppliers with a request for information and guidance, as necessary. Ofgem then undertakes the stress testing on the data provided, tests the results with the supplier and adjusts the findings as appropriate. The stress testing is carried out relative to the size and risk of a supplier.

Ofgem has set expectations that suppliers should be open and proactive with their regulatory engagement, with Ofgem staff encouraged to visit suppliers at their premises where possible to see first-hand how they deliver. In turn, Ofgem has committed to communicating clearly and openly with suppliers on Ofgem's priorities and the rationale for our judgements. Ofgem has said it will be done via the NRA's dialogue at individual supplier level and more broadly, where sector-wide themes and issues are identified which would be beneficial to share. Ofgem has also committed to reviewing and ensuring, as we emerge from the worst of the gas crisis, that the NRA is collecting and monitoring the right data for our objectives in the most efficient way for licensees and the organisation.

5.2.3 Financial obligations

In some countries, the monitoring of suppliers' financial data and/or the collection of data and financial reports from suppliers is already part of the supply license procedure.

A hedging obligation can be defined as a normative rule that ensures that suppliers complying with it act in a sufficiently prudent manner, but the NRA can decide whether it is possible to derogate from this norm in the event that the suppliers' financial capacity guarantees its equivalent resilience in the event of a crisis.

The obligation will not necessarily make it possible to cover all the risks that could jeopardise the supplier's ability to continue its business. It can, therefore, be considered necessary to ensure that suppliers have a sufficient financial base to deal with the contingencies of their business.

If considered necessary, options for strengthening the financial resilience of suppliers may include methods such as:

- Ensuring that suppliers have sufficient capital and liquidity to meet reasonably anticipated liabilities as they fall due;

- Implementing a capital buffer: A capital buffer is placed on top of minimum capital requirements to enhance a suppliers' resilience against shocks. Buffer capital related to market risk can strengthen the financial stability of suppliers;
- Setting a capital floor: A capital floor is the absolute minimum capital a supplier should have at all times to supply its customers;
- Setting a capital target: This target is to establish a reasonable minimum capital that a financially responsible, well-hedged supplier would need to have as a buffer for resilience in the event of a severe but plausible shock;
- Monitoring the equity of suppliers to ensure there is a sufficient buffer to absorb risks. Sufficient equity reduces the risks to be directly passed on to consumers;
- Liquidity monitoring: liquidity is needed to pay for daily physical purchases of electricity, but also for other costs in the daily operations;
- Setting minimum standards for financial indicators and monitor the reporting of these indicators by suppliers; and
- Collecting data and financial reports for all suppliers.

Practical examples

- *Ofgem, ACM and VREG monitor if suppliers have sufficient capital and liquidity.*
- *Ofgem sets a capital target: Ofgem decided on a capital floor of £0 adjusted net assets, representing the absolute minimum a supplier should have at all times to supply to domestic customers. A supplier who is in a negative adjusted net assets position may not be able to pay their debts without support and is extremely vulnerable to any external or internal shocks.*
- *Ofgem sets a capital floor: Ofgem decided to set the target level at £115 per domestic dual fuel customer equivalent (i.e., £57.50 per domestic electricity customer and £57.50 per domestic gas customer). Ofgem thinks this target level strikes the right balance between improving supplier resilience to severe but plausible shocks while remaining proportionate and cost effective for consumers.*
- *CRE would like to establish an objective financial rating for each supplier, based on the information provided annually by suppliers. This financial rating would make it possible to deduce a level of resilience (strong or limited), which the market player could claim in the event of a crisis. This level of resilience could be translated into differentiated consequences for suppliers deviating from the hedging requirement.*

5.2.4 Risk assessment and risk management strategies

Competent authorities can reflect on formalising hedging and risk management strategies that should be reflected in the company's governance. Suppliers should be able to demonstrate how they are managing their (financial) risks and resources.

Competent authorities could ask or force suppliers to formalise corporate governance focused on assessing, managing and mitigating the risks inherent in the business, making it possible to strengthen the effectiveness of the regulatory framework.

- Suppliers could be asked or forced to implement specific practices at the heart of the supply business and report about it to the competent authority. E.g., operational risk management strategies should be formalised and enforced in terms of:
  - identification and quantification of risks;
  - resulting exposure limits;
  - mitigation strategies;
  - assessment of the effects of their occurrence on the conduct of the business.
- Suppliers could be asked to report on the assignment of an internal or external risk manager responsible for managing the risks (see risks mentioned above) or on the assignment of a separate department dedicated exclusively to risk management, as well as internal control procedures.
- Corporate governance should strike the right balance between robustness and reactivity in order to prevent and address risks. Its scheme should be formalised, in terms of organisation and decision-making process. The competent authority could not only ask suppliers to report on corporate governance but also determine obligation criteria.

Practical examples

ACM and VREG define the following risks suppliers have to report on and how suppliers mitigate these risks:

- *Market risks due to volatile prices, margin calls, volumes or customer numbers;*
- *Debtor risks due to non-payment or late payment by customers;*
- *Counterparty risks due to non- or incomplete fulfilment of obligations by counterparties;*
- *Liquidity risks resulting from insufficient cash to meet payment obligations;*
- *Operational risks resulting from day-to-day operations, including volume forecasting and ICT risks;*
- *Risks resulting from activities other than the supply of gas or electricity and*
- *Other risks.*

Ofgem asks suppliers to provide an Annual Adequacy Self-Assessment to report on their capital adequacy, their business model, risks and mitigations over the previous 12 months and the coming year, evidencing how they are compliant with financial responsibility obligations.

ACM introduced an organisational assessment focusing on whether suppliers have:

- *Comprehensive Business Plans: Suppliers must present detailed business plans incorporating sound risk management strategies.*
- *Qualified Risk Managers: Suppliers are expected to employ qualified risk managers to oversee and manage risk factors effectively.*
- *Financial Recovery Plans: Suppliers must devise and submit a financial recovery plan, outlining corrective measures to be taken in the event of failing the financial assessment.*

Four tools for prudential regulation have been listed above in section 5.2, with a few key considerations for each tool. However, the design of a prudential regulation mechanism does not just come down to an arbitration between each of these tools. In most countries, the final prudential regulation framework will probably be a combination of tools, including those mentioned above. The following section presents general insights and constraints for competent authorities to reflect on in order to enrich the rules, regardless of the tools chosen.

5.3 Framework and procedures

5.3.1 Flexibility and agility of the mechanism

Solutions and measures for prudential regulation deemed most effective will depend on the Member State and the local market conditions. These parameters should be taken into account when designing the framework.

A deep understanding of market conditions is a strong prerequisite for any efficient prudential regulation mechanism. As competent authorities will need time to understand all hedging practices and assess the degree of exposure they allow, the transposition of Article 18a should leave room for step-by-step adjustments from both sides and make it possible for competent authorities to foresee regular updates of the regulatory framework.

When designing prudential mechanisms, a balance must be found between the agility and stability of the mechanism. Competent authorities need to adapt the rules to the market evolution but also need to give enough time to suppliers to adapt to the mechanism.

5.3.2 Harmonisation of mechanisms between gas and electricity

Article 18a applies to the oversight of electricity suppliers. Meanwhile, Article 8(3) of the recast Gas Directive gives the possibility for Member States to “assess financial strength [...] as a criterion for authorisation”.

Even though electricity prices have revealed greater volatility than gas prices during the recent energy crisis, the implementation of a complete prudential regulation of electricity suppliers while foreseeing minimal surveillance of the financial soundness of gas suppliers seems difficult to justify. Thus, competent authorities should be able to envision an undistinguished application of Article 18a-compliant prudential regulation of electricity and gas suppliers.

5.3.3 Licensing procedure

5.3.3.1 Possible uses of the licensing procedure for prudential regulation

If a Member State already has a supplier licensing regime, hedging requirements or financial requirements and qualities might be made a condition and integrated in the procedure to grant a license, as a criterion for suspension or revocation. The NRA could then use this procedure to assess purchasing and hedging strategies and other reasonable steps taken to limit the risk of failure, and the implementation of an appropriate hedging strategy could be made a necessary condition for the supplier to keep its license.

Remark: suspension and revocation as part of the licensing/registration procedure is not the case in every Member State.

Practical example

Supply license procedure by VREG
In Flanders (Belgium), all electricity and gas suppliers need to have a supply license issued by VREG. All suppliers are monitored yearly through a formal follow-up procedure in which certain defined documents and templates have to be submitted. Although not yet decided, VREG could extend the licensing and formal yearly follow-up procedure in order to be compliant with Article 18a.

5.3.3.2 Distinction between licensing/registration authority and prudential regulation authority

In situations, where the authority responsible for licensing or registration differs from the competent authority as per Article 18a, the implementation of prudential regulation remains feasible. However, adding another actor to the prudential mechanism adds complexity and extends the processing time. If the analysis performed reveals a substantial breach in the supplier's hedging strategy, or if the stress tests reveal a clear lack of robustness, competent authorities as per Article 18a need to react in order to avoid the propagation of the issue before the consequences of bankruptcy impact consumers.

Hence, regulatory authorities should either be given the specific authority legally to reduce the scope or remove supplier license/registration when necessary or have a "fast-track" procedure to have the sanction validated by the authority responsible for licensing/registration.

In order to enhance the efficiency and responsiveness of sanctions in situations requiring action, Member States aiming at using supplier licensing/authorisation as a tool for prudential regulation should at the very least strengthen bridges between the authority responsible for supplier licensing/authorisation and the competent authority as per Article 18a.

5.3.4 Confidentiality of hedging data

It is important that monitoring authorities have access to reliable hedging data from suppliers in order to characterise and assess the hedging strategy of a supplier. Since these data in competitive markets are part of suppliers' business strategies and might be sensitive, confidentiality and non-disclosure provisions may be necessary so suppliers can feel confident in sharing hedging data with the authorities.

5.4 Scope

5.4.1 Correlation between the risks to tackle (under vs. over-hedging) and the type of contracts/supplier falling within the scope of the measures

When implementing prudential regulation mechanisms, CEER advises the competent authority to define the risks to be addressed by the hedging requirements in accordance with the situation to be solved (mitigating against under or over-hedging).

Hedging strategies are considered important parts of the business strategies of actors in a competitive market. If the mechanism were to cause suppliers to under-hedge, the risk of supplier default would increase, whilst a mechanism causing suppliers to over-hedge would lead to unnecessarily high-risk premiums.

Under-hedging should be targeted as a priority, as suppliers naturally have less incentive to over-hedge for most of the offers they make, and several tools such as termination fees and consumption commitments from large consumers already limit the extent of over-hedging recorded.

CEER also encourages NRAs to consider the risk of over-hedging: any further and longer hedging, above the existing downstream commitments towards customers, can increase the supplier's risk. For instance, if a supplier hedges more than what it owes its customers at a time of high prices, then if prices decrease later, it needs to cover the losses somehow, which is difficult given competitive pressures from cheaper market prices, potentially endangering the supplier.

5.4.2 Balance between hedging requirements and freedom of procurement

CEER considers that Article 18a should not be implemented and used in a way that creates unnecessary market barriers. The constraints arising from prudential regulation should only be a barrier to unreliable suppliers. Suppliers should remain free to determine their own hedging strategy, however, they are required to prove its robustness.

Competent authorities should keep in mind that hedging requirements might negatively influence the procurement strategy of suppliers if the requirements set by the NRA are not sufficiently comprehensive to take into account the wide array of reliable hedging strategies. A good balance between hedging requirements and freedom of procurement will prevent overly high-risk surcharges for consumers.

5.4.3 Appropriate measures in case of irregularities

The purpose of prudential regulation is for suppliers to hedge sufficiently and if not, to accompany them in that direction. For instance, competent authorities could decide to accept open positions, under well-defined financial conditions ensuring without any doubt the robustness of the supplier in case of a crisis.

However, this does not remove the need to consider the consequences and actions to be taken in case of insufficient hedging. To guarantee the effectiveness of the chosen prudential rules, ultimately, it may be necessary to impose restrictions for a defined period of time or penalties to encourage suppliers to comply with the prudential rules. Possible examples of actions include:

- Preventing suppliers from concluding new contracts based on fixed prices, until the supplier complies with the conditions;
- Preventing suppliers from acquiring new customers temporarily, until the supplier complies with the conditions;
- Requiring contingency plans (capitalisation plans; selling portfolio);
- Determining fines; and
- Revoking the supply license, if prudential rules are part of the licensing conditions.

5.5 Ambitions versus resources

5.5.1 Balance between the risk of suppliers and administrative burden

Since administrative burdens can be a market barrier, CEER advises taking into consideration the suppliers' specificities and the time needed to adjust to in-depth reporting and hedging requirements.

5.5.2 Balance between the ambitions of the framework and available resources

Competent authorities may need to prioritise their control depending on their resources. The criteria for controlling all suppliers/only selected suppliers is up to the NRA or competent authority.

The ambition of the framework should be matched with the resources allocated to the NRA (or competent authority) for this purpose. The new EU provisions may have an impact both on the number of personnel and on the needed expertise, which is very difficult to assess before the transposition of the EMD Directive.

NRAs can think about a (partial) delegation of the workload to suppliers or to third parties (consultancy firms, for example). Competent authorities could also use priority rules in the supplier surveillance process, so as to avoid inefficient resource allocation.

6 Conclusions

During the energy crisis, several suppliers exited the market due to financial reasons and/or to a lack of (or poorly defined) hedging strategies. This experience demonstrated the need to ensure the reliability of suppliers and the coverage of bankruptcy risk, and to mitigate the consequences of such events on consumers.

The EMD Directive seeks to enhance consumer protection against price volatility, underlining the need to allow consumers “to benefit from a variety of contractual offers, and to shield household customers from high prices during an energy crisis”. It calls on Member States and NRAs to strengthen the framework for prudential supervision of electricity suppliers by ensuring “the existence of appropriate hedging strategies” for suppliers to avoid cases in which wholesale electricity prices “leave them financially at risk and, result in their failure, passing on the risks to consumers and other network users”.

The aim of Article 18a is to avoid hit-and-run strategies and to protect consumers against risky sourcing strategies. These strategies limit the resilience of a supplier in the event of high price volatility, and can lead to supplier defaults, additional costs for the community and large and sudden bill increases.

The considerations and guidance in this paper are based on the observation that Article 18a leaves room for tailor-made prudential regulation mechanisms. Member States have strong market specificities, which is why there is no one-size-fits-all solution.

For instance, Member States have responded differently to the energy crisis based on their national circumstances and existing frameworks. A successful solution in one MS may not work in another, may require adaptation or may be more effective. Prudential regulation in the banking and insurance sector may serve as inspiration when designing mechanisms for the energy sector.

CEER provides a toolbox containing regulatory tools that could prove relevant for prudential regulation:

- Hedging requirements;
- Stress tests;
- Financial obligations and monitoring of financial indicators and reports; and
- Monitoring of the company's hedging strategy and risk management policy, and its effective implementation within an appropriate governance structure

CEER also provides some insights and constraints to take into consideration, regarding:

- Framework and procedures;
- Scope; and
- Ambitions versus resources.

Competent authorities may need to prioritise their control, depending on their resources. The new EU provisions may have an impact both on the number of personnel and on the needed expertise, which is very difficult to assess before the transposition of the EMD Directive. The needed resources and expertise depend, for example, on the number of suppliers and the type of mechanism that will be implemented. NRAs can think about a (partial) delegation of the workload to suppliers or to third parties (consultancy firms, for example). CEER underlines that the ambition of the framework should be matched with the resources allocated to the NRA or competent authority for this purpose.

When designing prudential mechanisms, CEER encourages NRAs (or competent authorities) to be prepared to constantly improve and adapt the rules to the market and its evolution. However, a balance is to be found between the agility and the stability of the mechanism. Competent authorities need to adapt the rules to market evolution but also need to give supplier enough time to adapt to the mechanism. At the time of writing, changes in legislation in most Member States were still ongoing and not yet final.

One of CEER's strengths is knowledge and expertise sharing. CEER plans to continue its work on prudential regulation, for example by updating its 2024 survey in the course of 2025. CEER expects that interesting lessons will be learned in the coming years, as competent authorities put in place prudential regulation mechanisms to promote effective supplier risk management. These lessons could be shared in a future deliverable.

Annex 1 – List of abbreviations

Term	Definition
ACM	Authority for Consumers & Markets (NRA from the Netherlands)
BNetzA	Die Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen (German NRA)
CEER	Council of European Energy Regulators
CET1	Common Equity Tier1 is a component of Tier1 Capital, and it encompasses ordinary shares and retained earnings
CFD	Contract for difference
CNMC	Comisión Nacional de los Mercados y la Competencia (Spanish NRA)
CRD V	Capital Requirements Directive
CRE	Commission de régulation de l'énergie (French NRA)
CRR II	Capital Requirements Regulation
DSO	Distribution System Operator
ECB	European Central Bank
EDF	Electricité de France
EER	European Energy Retailers, the Network of Independent Energy and Solution Providers
Ei	Energimarknadsinspektionen (Swedish NRA)
EMD	Electricity Market Design
ERSE	Entidade Reguladora dos Serviços Energéticos (Portuguese NRA)
MS	Member States
MWh	Mega Watt Hour
NRAs	National Regulatory Authorities - in this paper, NRA can be understood to include the competent authority, designated by the Member State, according to Article 18a
Ofgem	Office of Gas and Electricity Markets (British NRA)
PPA	Power Purchase Agreement
RSR	Regular Supervisory Report
SCR	Solvency Capital Requirement
SFCR	Solvency and Financial Condition Report
SOLR	Supplier of Last Resort
TIER1	Tier 1 capital is the minimum amount that a bank must hold in its reserves to finance its banking activities. This ratio measures a bank's core equity capital against its total risk-weighted assets

Term	Definition
VREG	Vlaamse Regulator van de Elektriciteits- en Gasmarkt (Regional regulatory Authority in Belgium)

Annex 2 – Prudential regulation in the banking sector

Prudential regulation has existed in the financial sector for many years. Prudential regulation requires banking organisations to measure and manage risks prudently, to hold adequate capital and liquidity, and to have in place workable recovery and resolution plans.

Prudential requirements aim to make the financial sector more stable, while ensuring that it is able to support households, firms and other end-users of financial services.

What the EU is doing and why

The EU prudential requirements that were introduced in the aftermath of the global financial crisis ensure that banks are better able to withstand liquidity shocks and absorb losses. These rules, which are part of the EU single rulebook, aim to strengthen the resilience of the EU banking sector, while ensuring that banks continue to finance economic activity and growth.

The prudential framework is composed of a Directive – the Capital Requirements Directive (CRD V) – and a Regulation – the Capital Requirements Regulation (CRR II). These rules integrate into EU law the Basel III international standards.

International banking regulation standards under Basel III

The Basel Committee on Banking Supervision (BCBS) sets the standards for international banking prudential regulation. It is a forum for cooperation on the supervision of the banking system and its membership is made up of central banks and supervisory authorities from 28 jurisdictions.

The BCBS drew up Basel III as non-legally binding international standards focusing on “internationally active banks”. EU implementation of these standards takes the form of binding EU law. The EU has deliberately chosen to apply the Basel standards to all EU banks (as well as investment firms), because it wants to build a strong single market for all EU domiciled banks, active within and across the 27 EU Member States, as well as globally.

The EU has actively contributed to developing the BCBS standards on capital, liquidity and leverage. The rules introduced in the EU are in line with the overall objectives of the Basel III framework but required tailoring of the Basel standards, where appropriate, to fit the diversity of the banking system at EU and national level and to address proportionality concerns with regard to smaller and domestically oriented banks.

More information: https://finance.ec.europa.eu/banking/banking-regulation/prudential-requirements_en

Annex 3 – Prudential regulation in the insurance sector

What the EU is doing and why

Insurance policies play an important role in the lives of the majority of European citizens. For many of the things people do every day, holding an insurance policy is essential to protect against potential risks. An insurance policy can also serve as a savings product, which will allow policyholders to provide for their long-term welfare while insurers are able to channel these savings via financial markets into the real economy.

On the one hand, there should be harmonised rules on the taking up and pursuit of insurance business to allow policyholders to enjoy the benefits of an effective Single Market for insurance. On the other hand, the legal framework should prioritise the protection of policyholders and beneficiaries. In particular, the prudential rules should ensure that capital requirements are harmonised throughout the EU in order to achieve a uniform level of protection for policyholders.

The disorderly failure of an insurer can therefore have a significant impact on policyholders, beneficiaries, injured parties or affected businesses. This is especially the case where a substitute for vital insurance services cannot be found in a reasonable amount of time and at a reasonable cost.

Resolution is the last resort and should only occur when national authorities determine that a failing (re)insurer cannot go through normal insolvency proceedings without harming consumers or businesses or causing financial instability more broadly.

Solvency II

Solvency II is a harmonised prudential framework for insurance firms, applicable since 2016. It replaces a patchwork of rules in the areas of:

- life insurance;
- non-life insurance; and
- reinsurance.

Solvency II rules introduce prudential requirements tailored to the specific risks which each insurer bears. They promote transparency, comparability and competitiveness in the insurance sector.

The EU framework consists of:

- a Directive;
- delegated acts; and
- technical standards.

The Solvency II Directive became fully applicable to European insurers and reinsurers on 1 January 2016. It covers three main areas, related to capital requirements, risk management and supervisory rules.

- **Pillar 1: Risk-based capital requirements**

  The Directive requires insurance companies to hold capital in relation to their risk profiles to guarantee that they have enough financial resources to withstand financial difficulties.

- **Pillar 2: Governance and risk management requirements**

  Insurance companies have to:
  - put in place an adequate and transparent governance system; and
  - conduct their own risk and solvency assessment on a regular basis.

- **Pillar 3: Supervisory reporting and public disclosure**

  The Directive
  - enables supervisors to review and evaluate whether insurance companies comply with the rules; and
  - requires these companies to report to supervisory authorities and disclose information publicly.

More information: https://finance.ec.europa.eu/banking/insurance/insurance-regulation_en

About CEER

The Council of European Energy Regulators (CEER) is the voice of Europe's national energy regulators. CEER's members and observers comprise 39 national energy regulatory authorities (NRAs) from across Europe.

CEER is legally established as a not-for-profit association under Belgian law, with a small Secretariat based in Brussels to assist the organisation.

CEER supports its NRA members/observers in their responsibilities, sharing experience and developing regulatory capacity and best practices. It does so by facilitating expert working group meetings, hosting workshops and events, supporting the development and publication of regulatory papers, and through an in-house Training Academy. Through CEER, European NRAs cooperate and develop common position papers, advice and forward-thinking recommendations to improve the electricity and gas markets for the benefit of consumers and businesses.

In terms of policy, CEER actively promotes an investment friendly, harmonised regulatory environment and the consistent application of existing EU legislation. A key objective of CEER is to facilitate the creation of a single, competitive, efficient and sustainable Internal Energy Market in Europe that works in the consumer interest.

Specifically, CEER deals with a range of energy regulatory issues including wholesale and retail markets; consumer issues; distribution networks; smart grids; flexibility; sustainability; and international cooperation.

CEER wishes to thank in particular the following regulatory experts for their work in preparing this report: Alejandro Eguez (Ei), Catherine Contiguglia (Ofgem), Christelle Heng (CRE), Filipe Matias Santos (ERSE), Jakub Komarek (Ofgem), Pierre Frodé de la Forêt (CRE), Luciano Duran Morales (ACM), Malte Luks (BNetzA), María González De Perosanz (CNMC), Mattias Johansson (Ei), Michael Chan (ACM), Per Nässén (Ei) and the lead drafter Sofie Lauwaert (VREG).

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