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INFORMATION

Financial relationships in the National Electricity Market

This fact sheet provides a background to financial relationships that exist between participants in the National Electricity Market (NEM), and how those relationships could act to transmit financial difficulties from one participant to another.

Introduction

Generators, retailers and other businesses that participate in the NEM have complex financial relationships with each other.

These relationships primarily arise from the financial contracts that participants use to hedge their exposure to the spot price for electricity.

Electricity retailers and generators that participate in the NEM buy and sell almost all of their electricity through the wholesale spot market. Retailers and generators pay and receive the spot price for this electricity. The spot price is calculated every 30 minutes and can be highly volatile – it can vary between $13,500 and -$1,000 per megawatt hour.

The most commonly used instruments to manage spot price volatility risks are 'derivative', or 'hedge', contracts. These contracts are called derivative contracts because their value is linked to the underlying commodity price, in this case, the wholesale electricity price.

The two most widely used types of hedge contracts are exchanged traded contracts and over-the-counter (OTC) contracts. Exchange traded contracts are traded on the ASX 24 with the ASX and are relatively standardised products. OTC derivative contracts are negotiated bilaterally between two counterparties, which enable the contracts to be tailored to individual situations.

An OTC contract is often negotiated between a generator and a retailer. These participants have opposite risk profiles; a retailer seeks to manage risks arising from high spot prices, while a generator seeks to manage risks associated with low spot prices.

Both types of contracts seek to create an offsetting payment or revenue stream that balances out the change in the spot price (therefore, they are sometimes called 'contracts-for-difference').

For example, a generator and a retailer could enter into an OTC electricity derivative contract with a ‘strike price’ of $50 per MWh. If the spot price is above this strike price, the generator will pay the retailer the difference between the spot price and the strike price. The retailer will do the same if the spot price gets below the strike price. This will in effect hedge the generator’s or retailer's spot price exposure.

Financial stability in the NEM refers to the smooth flow of funds between market participants so that the buying and selling of electricity continues to operate as intended. It relates to the stability of the financial framework in the NEM as a whole, and not the financial position of an individual electricity market participant.

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Financial relationships in the NEM support the operation of the market.

They could also act to transmit financial difficulties from one participant to others.

Financial instability in the NEM

The financial interdependencies between market participants also mean that one participant experiencing some form of financial distress can affect others.

For example, a participant defaulting on its obligations under its hedge contracts could transmit financial distress to its counterparties under these contracts. This is because, following the failure of a hedge contract counterparty, a participant could find itself exposed to the risk of spot price volatility.

By entering into hedge contracts, market participants are therefore essentially replacing their exposure to spot price volatility with an exposure to the risk of their counterparties defaulting on their obligations under the contracts. This is referred to as **counterparty (or credit) risk**.

For exchange traded contracts, arrangements are in place to manage counterparty risk. These arrangements include financial requirements on participants to build up financial reserves. Such reserves act as a buffer to protect against, and absorb impacts of, a participant failing. Similar arrangements are often but not always used in relation to OTC contracts. Instead, counterparty risk is essentially managed by participants' internal risk management practices.

If the transmission of financial distress from one participant to others becomes extreme, it is referred to as **financial contagion**. Financial contagion has the potential to threaten financial system stability in the NEM by causing the cascading failure of multiple participants. In such circumstances, the financial relationships that support the efficient operation of the NEM could break down. This is also referred to as **systemic risk**.

Financial system stability in the NEM is dependent on the electricity market being able to absorb shocks. Whether such shocks would occur and threaten the NEM's financial stability is dependent on a wide range of variables, including the ability of participants to source additional funding to manage any short term cash flow impacts, and the market circumstances at the time, amongst others.

While the likelihood of such shocks is uncertain, the failure of a large market participant could have significant flow-on effects in the market. This could include disruption to consumers, damage to public confidence, and impacts on the broader economy. The emergence of financial contagion could lead to **financial instability** in the NEM.

AEMC NEM financial market resilience review

The Australian Energy Market Commission (AEMC) was asked by the Council of Australian Governments' (COAG) Energy Council to provide advice on risks to the financial stability of the NEM, and whether any additional measures may be required to manage those risks. The AEMC has made a number of recommendations in its final report on the NEM financial market resilience review to improve the resilience of the NEM to better manage and respond to risks to the financial stability of the NEM that may occur. Further details on the AEMC's final report and recommendations can be found at www.aemc.gov.au

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