

COMPLEMENTARTY OF AUCTION AND CONTINUOUS MARKETS: THE CASE OF THE GERMAN SPOT MARKET FOR QUARTER HOURLY CONTRACTS

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Overview

Previous to December 9th 2014, the quarter hour products could only be traded on a continuous basis in the German power market. From that date, market participants have the possibility to trade quarter hourly products either in an auction (uniform price) or on a continuous market (pay-as-bid principle). This paper looks at the impact of the introduction of an auction in addition of an existing continuous market in terms of liquidity and volatility.

This work contributes in the financial literature on the discussion of “auction versus continuous” by highlighting the complementarity of the two mechanisms. It also contributes to the power market literature by applying the analysis to the German spot power market. This paper is the first to analyze the complementarity of two trading paradigms on the electricity market.

While most of the research on the subject opposes call auction to continuous market, the outcome of this research sheds light on the complementarity of those two market mechanisms in the case of the short-term power markets. It may be interesting for policy makers in order to make market design decisions. It can also be very interesting for power exchange willing to increase economic efficiency and palliate some market design issues as well as offer more trading opportunities to their market participants.

Method

The research question is the following : What is the impact of the introduction of the 15-Minute auction on the continuous market for quarter hourly products?

This question is addressed by using data for the period 1st of January 2014 to 31st of December 2015. The data is composed of the trades and orders send by the market participant to the German spot market (auction and continuous markets). We use panel data econometrics, particular fixed effects in order to assess the impact of the introduction of the 15-Minute auction in term of volatility and liquidity.

Results and conclusion

The study highlights the positive effect of the introduction of an auction in addition of the German quarter hourly continuous market.

We found that the introduction of the 15-Minute auction reduced the price volatility at the opening of the trading session. It also reduces the peak of traded volume at the beginning of the trading session of the continuous market.

However, even if the auction has a small business stealing effect on the continuous market, the overall quarter hourly volume traded increased.

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