
[REDACTED] RESPONSE TO CMA ORAL HEARING QUESTIONS

1. INTRODUCTION

[REDACTED]¹

Competing exchanges and clearing houses believe the merger will lead to a substantial lessening of competition. Trayport has a number of means through which it can harm competitors and control by ICE will give it the incentive to do so, due to the trading and clearing gains ICE will expect from such foreclosure. ICE through Trayport's front-end and back-end, will have the ability to foreclose exchange order book trading and associated clearing volumes (Sections 3 and 4), and the incentive to do so (Section 6), with a resulting material reduction in competition (Section 7). ICE, through Trayport's straight through processing (**STP**) link, will also have the ability and incentive to foreclose trade registration and associated clearing volumes, lessening competition for these services (Section 8). ICE also has the ability to access information critical to the competitive success of competing exchanges and this would also harm competition (Section 5).

2. BACKGROUND

Regulatory environment

The regulatory environment has changed significantly over the last few years and this has consequences for trading venues. In particular, the revised Markets in Financial Instruments Directive (MiFID II) will enter into force by 2018, which has two major implications for commodity futures and especially power and gas:

- The general exemption for commodity trading as foreseen by MiFID I has been repealed. Therefore, any market participant is by default an *investment firm* in the sense of MiFID II, meaning that full compliance with MiFID II is required. In turn, any client is a *financial counterparty* in the sense of the European Market Infrastructure Regulation (**EMIR**), so that EMIR requirements fully apply. Lastly, in turn, every market participant is an *institution* in the sense of *Capital Requirement Directive IV (CRD IV)*, so that CRD IV fully applies as well.
- However, firms with physical assets may either benefit from an exemption as foreseen by MiFID II from being an *investment firm* in case their traded volumes in *financial instruments* stay below certain thresholds or they trade products which do not fall under the financial instruments definition. It is therefore beneficial for firms to enter contracts that are not classified as *financial instruments*. The first calculation of the traded quantities is likely to be conducted in 2017 based on 2016 trading activities.

The impact of MiFID II is highly uncertain and [REDACTED] is not in a position to provide to the CMA an assessment of its likely outcome; indeed it would be very surprising if anyone could. However, two things are clear. First, there is a huge amount of regulatory and political risk in the markets in which the

¹ [REDACTED]

[X] operates. This inevitably leads to [X] attempting to manage this risk the best it can. [X] Second, there is a general push from policymakers at the European level both to establish a single European energy market and for greater transparency and management of risk in financial market. [X]

[X]²

3. ABILITY TO FORECLOSE FRONT-END SERVICES

3.1. Trayport is of critical importance to front-end services

A high proportion of [X] trading volumes are conducted through Trayport technologies

Most trading participants in the energy market use Trayport front-end software technology. Several main gas exchanges additionally license Trayport's back-end technology and, as a result, are required to use Trayport's front-end software as well. Trayport's closed API system means Trayport's Exchange Traded System (**ETS**) is not available to customers unless they also use one of Trayport's front-end solutions (e.g. Trading Gateway or Direct Screen). [X]

Trayport's Trading Gateway is critical to the success of a trading venue. Trayport has become the all-pervasive and essential platform for certain energy and commodity trading markets in Europe. Trayport underpins 85% of all Power, Gas, Coal and Emissions trades in Europe; in specific markets this is even higher.³ Without being accessible on Trayport on a level playing field, a trading venue cannot compete: marginal differences between trading venues that are both active in a particular market results in volumes shifting to the more competitive venue.

The ubiquitous presence of Trayport makes European energy and commodities trading different to other markets. Best prices offered by all trading venues – OTC brokers and exchanges – are shown on a single screen that is embedded in the trading processes of customers. As a result, Trayport facilitates intense competition, both amongst exchanges and amongst OTC brokers, as well as between exchanges and OTC brokers.

[X]

The variation across products reflects the maturity of the markets. While most of the products are above 80%, where a market was more developed, from an [X], prior to Trayport's emergence and current strength – e.g. German Power – the share will be less.

[X]

As a result of the merger, these volumes will be significantly at risk to competing exchanges. ICE will be able to disrupt other trading venues's trading activity and, in many markets, will have a strong expectation that they will capture a significant proportion of these volumes.

These volumes are critical to the competitive strength of other trading venues in particular markets. The volumes through Trayport can in many markets represent a majority of a trading venues volumes so that ICE can effectively marginalise these competitors from these markets. While some [X] trading volumes do not go through Trayport, and these cannot be directly targeted by ICE for foreclosure, the harm to competitors can be greater than just the current volumes traded through Trayport suggest for a number of reasons.

Clearing volumes are also affected

² [X]

³ <http://www.trayport.com/en/what>

All trades through exchanges [X] must be cleared. As a result, when traders choose to trade on a specific trading venue, they also automatically choose to clear that trade through the adhered clearing house. This means that the Trayport front-end, which is used by traders to choose a trading venue, is critical to the trading venue for the volumes and revenues generated from exchange execution (i.e. trades through the central limit order book) *and* the clearing revenue generated from exchange executed order book trades. When executing on exchange, the choice of trading venue dictates the choice of clearing house. This has the effect of amplifying the revenue impact of Trayport on the [X]. These initial sections therefore deal with the overall impact of Trayport on trading and clearing volumes associated with executing on exchange (i.e. foreclosure of order book volumes and associated clearing volumes).

In contrast, where a trade is matched by a broker, the broker obtains the trading volumes and that trade can be either cleared or uncleared. Where it is cleared, exchanges and clearing houses also compete for the trade registration and clearing volumes associated with this business. Through its STP link, Trayport is very important to determining the effectiveness of a clearing house in competing for these clearing volumes and this is discussed in Section 8.

Trayport volumes will not switch away from Trayport

Exchange volumes through Trayport are incremental to the volumes through other screens; they are an entirely separate source of demand, reflecting those traders actively using and embedded in Trayport. As outlined below, these volumes would not switch from the Trayport screen. If there was any disruption to a competing exchange's position on Trayport, the volumes would continue to be traded through Trayport but instead of using this specific trading venue the volumes would be traded on the closest alternative (i.e. the next best price listed in Trayport or second preference venue for the trader). The elasticity of demand for Trayport is significantly lower than the elasticity of demand for trades on any given exchange, as Trayport customers need to access the market in an aggregated way and cannot practically open a second screen to follow specific prices of other venues.

Trayport provides critical levels of liquidity

Even if significant volumes were to go through alternative screens, the Trayport volumes would still provide the critical levels of liquidity required in the market. Without this liquidity, in many markets [X] would no longer be competitive. In this context, it is important to recognise the importance of liquidity in determining the competitive strength of a trading venue. Liquidity attracts liquidity and, equally, the loss of liquidity fuels the loss of further liquidity. While the Trayport volumes will not switch to alternative screens, the ability of a competing exchange to retain both the volumes traded through Trayport *and* those volumes traded through other screens are both dependent on the overall liquidity that an exchange can provide. Consequently, as a result of these network effects, the loss of volumes traded through Trayport can put at risk all of volumes of a competing trading venue in a market.

Attracting liquidity is very difficult

Attracting liquidity is very difficult and when liquidity is lost to a competing exchange, it is very difficult to get this liquidity back. This is especially true for initial liquidity to build volumes in contracts on exchange and the battles fought between exchanges for initial levels of liquidity to enter a new market can be instructive of the importance of the incremental impact of Trayport volumes. While there are some instances that a trading venue can point to where entry into a new market, including entry against a competing exchange, has been successful, of course some of the initiatives have not been successful.

Where attempts have been made to enter new products or markets, the presence of bid ask prices on Trayport has been crucial and a necessary requirement to even consider entering. [X] Without the visibility on the Trayport screen, entry would not have been viable. [X]

As a corollary, the loss of Trayport volumes makes it impossible to continue to compete. The energy market expects comparability of broker and exchange prices on one screen. If you were only able to provide a direct screen or even an aggregator screen for exchange traded products, it is very likely that

the main traders in the energy market (utilities, municipals and distributors) would not use your exchange offerings at all.

Without the Trayport volumes, an exchange would be unprofitable in many markets

Without the incremental Trayport volumes and the revenue they provide, a competing exchange would not be profitable in a number of products and markets. While it is possible to continue to operate in a market while unprofitable, losses can only be sustained under the expectation of future profitability. Without access to the Trayport volumes on an equal footing, this will not be possible. an exchange can still offer the contracts in a particular product on its exchange. However, the propensity [X] to actively compete and seek to win business in those contracts where its ability to gain volumes and make a profit are hindered by its restricted or less equal access to Trayport will inevitably be limited.

The front-end is also of critical importance [X]

[X]⁴ To be clear, if ICE has the ability to foreclose back-end services especially Trading Gateway [X] it automatically has the ability to foreclose front-end services to this exchange. *In addition*, even if [X] and brokers do not use the Trayport back-end (which is not possible in the short/medium term given the absence of alternatives providing similar functionalities as outlined below), they would still be reliant on the Trayport front-end in order to compete in Gas markets in the UK and Europe. If anything, the reliance of a venue on both the back-end and front-end of Trayport makes it an even more exposed foreclosure target, giving ICE a greater ability to harm this competitor and wider range of tools with which to do so.

[X] All European utilities or European energy firms use Trayport Trading Gateway to access the gas market whereas financial firms may use different front-ends to access ICE liquidity, but these financial firms are not yet active on other trading venues, due to Trayport connectivity limitations (the exact proportion of ICE trades in natural gas that do not pass through Trayport are unknown). So, if these exchanges were to change to another back-end, its liquidity would continue to depend fully on Trayport distribution as only new customers from the financial world would be able to use other front-ends. Moreover, as European firms usually have multi-year agreements with Trayport and as a switch to another aggregator/front-end may require significant investments, these firms are very likely to maintain their use of the Trayport front-ends for many years, even if all exchanges and brokers rely on non-Trayport back-ends.

When entering new products, Trayport has also been crucial [X]

3.2. Finding a credible alternative is not possible

Available alternatives are inadequate [X]

There is currently no credible alternative to the Trayport front-end, Trading Gateway (via GV Portal or directly). The Trayport front-end is superior to anything else currently available on the market, especially as it is the only front-end that can provide direct access to Trayport back-ends (exchanges and OTC brokers).

[X]⁵

[X]

Other ISVs work *alongside* and are *complementary* to Trayport, being utilised for very different sources of demand. None of them are a viable *alternative* to Trayport as nobody is able to aggregate both

⁴ [X]

⁵ [X]

exchange and broker prices. As noted above, the volumes currently sourced through Trayport would not under any circumstances switch to these alternatives. Traders have a strong preference for the single screen system and the aggregation with the broker price provided by Trayport. Trayport systems are a requirement for the initial price distribution and these alternatives do not offer this facility. As Trayport does not offer an open API, the only way to access Trayport ETS and BTS systems is through the Trayport front-end systems.

Other companies have also tried in the past to develop an alternative to Trayport that offered an aggregation with broker pricing, and therefore competing with Trayport. However, considering its closed commercial model, it would have been unlikely that Trayport would have agreed to list exchanges and OTC prices coming from this new back-end on Trading Gateway (in the same manner Trayport refused to list Griffin prices in 2013 – on the WebICE back-end – onto Trading Gateway), therefore eliminating all hopes of these back-ends being visible and thus tradable by European traders. Despite significant investment and a very attractive offer provided to brokers and traders, these companies found that it was impossible to get any traction and it saw no shift in behaviour in this “chicken and egg” technology situation.

It appears impossible to challenge Trayport as the OTC markets can only be accessed via the Trayport system, as traders have a strong preference for the single screen system provided by Trayport and as these traders have usually signed multi-year agreements and do not currently have the capital to finance in-depth IT projects to support switching to another front-end technology.

Trayport network effects are insurmountable

Trayport is characterised by very strong network effects that create prohibitive switching costs for any individual (or small group of) market participant(s). The effect is what appear to be insurmountable barriers to the success of any alternative platform. These network effects are hugely exacerbated by the multitude and diversity of market participants that use Trayport and have it embedded in their existing systems and the cumulative costs to them all of switching away.

For brokers and exchanges, any unilateral shift away from Trayport would be commercial suicide. Attempts by exchanges or brokers to work together to develop an alternative are highly unlikely to succeed. Indeed, as set out in more detail below, brokers have tried in the past to coordinate on this and other issues and this is not something that has ever been possible considering the intense competition between brokers themselves and also with exchanges.

For the multitude of diverse traders (banks, utilities, energy companies, hedge funds, etc.), Trayport is so deeply entrenched in their risk systems that switching away would be very costly. Additionally, many traders will have long-term contracts with Trayport. Consequently, it has been impossible for the brokers to switch to a different provider. Even if brokers were able to coordinate and try to shift themselves to using an alternative platform, traders would not allow them to do so; it would be an impossible sell to traders.

Well-funded previous attempts to create an alternative have failed

As a demonstration of the strength of the network effects associated with Trayport and the difficulty in developing or sponsoring an alternative, ICE’s attempts to create an alternative to Trayport in 2013 is very instructive. ICE licensed its back-end and front-end (WebICE) technology to a broker, Griffin Markets (**Griffin**), that entered the European gas and power market with an aggressive pricing strategy. With this partnership, ICE aimed to provide traders and brokers with an alternative to the Trayport front-end (note however that WebICE can only aggregate prices from ICE back-ends and could thus not serve as an aggregator of OTC broker prices available in Trayport back-ends). This ‘entry’ attempt involved significant investment and commitment from ICE, including an extremely aggressive fee and technology pricing model. ICE was effectively offering their BTS and screen to brokers for free.

Given the high prices charged by Trayport, brokers were initially interested but ultimately did not switch away. Griffin, the broker that did switch, was left stranded with the alternative technology. Trayport refused to aggregate Griffin prices in Trading Gateway and, as a result, Griffin was unable to compete. Griffin was foreclosed from Trayport and in 2014 ended its partnership with ICE and returned to Trayport. Since switching to Trayport, Griffin has had some success gathering volumes.

The competitive proposition offered by ICE is something that would be very challenging if not impossible for other prospective 'entrants' to match. The fact that this incredibly aggressive, and well-funded, attempt by ICE to challenge Trayport failed points to the likelihood of an alternative to Trayport emerging being extremely small, if not impossible, even if it is sponsored and developed by well-funded market participants.

3.3. Existing contractual protections are not sufficient

The existing protections in the contracts between a trading venue and Trayport do not cover scenarios included in the foreclosure strategies outlined below and are not defined in sufficient detail to adequately protect these competitors. They therefore believe that it is only a matter of time before Trayport, under the ownership of ICE, begins to make changes that other venues would find very difficult to seek redress from.

Even a cursory glance at an extract from Trayport's terms and conditions gives ICE/Trayport sufficient flexibility to disrupt supply on the basis of technical issues. For example, section 8.1 (warranties) states that:

"The client acknowledges and accepts that... the operation of the software will not be uninterrupted or error-free, and agrees that the existence of...interruptions in the software shall not constitute a breach of this agreement."

The provisions in the contract demonstrate that any exchange or broker is indeed vulnerable to a possible foreclosure strategy and that its presence on Trayport cannot be assured.

Importantly, irrespective of the exact interpretation of the contract, [✂] contract law would be insufficient to protect the contractual party from significant harm. First, under many of the foreclosure strategies that could potentially be adopted by ICE, the competitor may not be able to (immediately) identify that foreclosure – and a potential breach of contract – has actually occurred. Second, due to the importance of liquidity and the difficulty in attracting liquidity back after having lost it, contract law would simply be too late. The competitive game would be lost.

3.4. Recent evidence supports an ability to foreclose

As an illustration of ICE's ability to foreclose competing exchanges through its ownership of Trayport, Trayport has recently slowed down the development of the GV Portal. New releases and updates to the Trayport software have become less frequent and, with each release, a reduced number of new functions and services have been included as part of the release, despite being requested. This has the potential to limit or prevent others from offering new functions and services to Trayport Trading Gateway customers. Trayport has also doubled the price for the service licence for GV Portal over the last few years [✂]

While neither of these actions have been directly related to the merger, they clearly show the inherent strength of Trayport and the inability of exchanges and brokers to switch away, including either to switch Trayport volumes to other screens or develop alternatives. It is in this context that the incentives of ICE to develop Trayport's GV Portal and to increase prices must be considered. If Trayport currently has the ability to diminish its service provision (and increase prices), it is self-evident that the common ownership of ICE and Trayport would create an additional incentive for ICE to diminish the service offered (or increase prices) to competing trading venues further. As outlined below in relation to ICE's incentives,

foreclosure strategies undertaken by ICE have the potential to win significant trading and clearing volumes. However, given the strength of, and reliance of competing trading venues on, Trayport such significant volumes are not necessary to give ICE an incentive to foreclose. ICE would only be required to win a small amount of volumes for such a strategy to be effective and for competitive harm to arise.

Further, as outlined above, there has been no recent attempt to offer a new product or enter a new market that has been successful without the presence of pricing [REDACTED] on Trayport. Trayport is a necessary requirement for successful entry – for [REDACTED] any other trading venue, exchange or broker – further highlighting its indispensable nature and the ability it gives ICE to foreclose competitors.

3.5. ICE has a range of very harmful foreclosure strategies available

The main concern of competing trading venues is that Trayport will use its ubiquitous market position to deteriorate the quality of its service. This could involve a range of different strategies, including:

- **Delaying the timing of prices being displayed:** removal or delay in a price being shown can have an enormous effect. The CMA inquired specifically about this point during the Hearings to understand where the delay of the timing of prices may have an extreme effect:

[REDACTED]

The key point is that the immediate impact of a very small delay in displaying prices could be hugely damaging to an exchange and this would have a lasting effect on traders' willingness to use that exchange.

More generally, even in normal non-volatile days, if the prices from ICE exchanges appear even a few milliseconds before other platforms, these orders will appear first in the Trading Gateway aggregators and will have a higher chance of being executed (especially through fast-trading algorithm machines), thus shifting a part of the liquidity toward ICE trading and clearing facilities.

- **Delays in listing new products or new venues** (or the refusal to list or de-listing): competitors will often be seeking to develop new products and that listing can go on to become the exchanges' most significant source of revenue. The initial impact is such that a short delay in listing a new product can be devastating to an exchange's business.

[REDACTED]⁶

[REDACTED]

The integration of new products into the Trayport Joule front-ends was a necessary requirement to develop liquidity [REDACTED], without which the trading venue would have obtained no volumes. If Trayport were to delay the integration of such products in Trayport front-ends or into BTS systems of brokers, the competitor's revenue streams would be seriously harmed.

- **Refusing or reducing the usage of APIs** for customers or other ISVs on Trayport software.
- **Slowing down development** of connection middleware, including 'gold-mapping,' to make less function available: a GV Portal customer is dependent on the functions that exist in the GV Portal system and therefore Trayport's development of those functions. It is not possible to connect all functions and services of a back-end on a Trayport Trading Gateway via GV Portal.

⁶ [REDACTED]

[X]⁷

[X]⁸

More importantly, the degradations of quality that are outlined in detail above and in previous submissions to the CMA are *immediately passed on to traders*. They do not require an increase in license fee and an assessment of pass-through is not relevant. Traders may not even be aware of the degradation, only the effect (i.e. volumes are traded through ICE rather than other venues) as ICE offers the better price or is active first in a particular market. In some instances, other markets may not be able to identify immediately that the lost volumes, or ICE winning the race to enter a market, is actually due to an anti-competitive foreclosure strategy.

As a result of the foreclosure strategies likely to be pursued by ICE, the extent to which a foreclosure target may be able to withstand such foreclosure (e.g. through deep pockets, retaliatory action or absorbing price cuts) is also not relevant. The foreclosure immediately weakens competing exchanges and inhibits their ability to compete, leading to the loss of volumes. This can continue indefinitely reducing the competitive constraint faced by ICE. More than this, however, as outlined below, the initial shift of liquidity can be especially damaging as those volumes can be very difficult to get back. The short term impact has consequences for the competitive strength in the long term.

4. ABILITY TO FORECLOSE BACK-END SERVICES

4.1. Trayport is of critical importance to back-end services

[X]

4.2.

[X]

4.3.

[X]

[X] These markets are **characterised by very strong network effects** with each market in which one or both is active at risk of potentially tipping if either one can win sufficient liquidity. This phase, of **competition for the market**, is common in industries with network effects. Where these network effects are sufficiently strong or one of the competing firms can get an edge over its competitor – for example, through a first mover advantage, on-boarding of market makers or liquidity providers, or more reliable pricing information – it is not uncommon for firms who were actively competing against each other for the market, to be unable to sustain the investment costs required to gain volumes. It is also not uncommon that in such circumstances that these strong competitors during this phase of competing for the market subsequently have to exit the market or become an ineffective or more minor player.

Second, these network effects can create huge barriers to entry. Attempting to draw liquidity away from an incumbent player is very challenging and the incumbent is in a better position to protect its market position. As a result, **once liquidity is lost it is very difficult to get this back** and so the network effects create a persistence in outcomes and potential long term hysteresis.

⁷ [X] questionnaire (Additional) dated 28 June, question 4.

⁸ [X]

The most important factor in the competitive strength of an exchange order book is liquidity. The more market participants, the tighter the spreads and the more liquid the market is. If a portion of [REDACTED] volumes are lost to ICE through foreclosure, the liquidity on ICE and the spreads it can offer will be at a level at which [REDACTED]. While it will still have commercial strategies to win volumes back such as reducing fees these will not be sufficient to offset the more attractive spreads that result from the volumes that have shifted. In this sense there is a sort of 'tipping point', where, if a sufficient volume switches, the more attractive spread makes winning the volumes back incredibly difficult. The impact of foreclosure therefore is likely to have a persistent effect in the long-run and one that is far greater than the actual volumes switching suggest.

[REDACTED]

[REDACTED]

4.4. ICE has a range of foreclosure strategies available

[REDACTED]

4.5. Contractual protections are not sufficient

[REDACTED]

5. ACCESS TO COMMERCIALY SENSITIVE INFORMATION

ICE's acquisition of Trayport gives it a further ability to significantly harm competitors. Information flows with Trayport are critical to the commercial success of existing products and markets and potential future markets.

To illustrate the type of information that may appear minimal and harmless, but which, in ICE's possession could have an utterly devastating impact on the business of competitors three examples are provided:

- the identity of the largest customers [REDACTED]
- the identity of certain customers (market makers, liquidity providers) that support the development of new products; and
- the knowledge of market entry dates.

In existing markets, if ICE was to learn the identity of a competing exchange's top five customers they could far more easily shift liquidity and substantially alter the relative competitive positions of ICE and a competing exchange. By targeting the top customers of its rival with a targeted commercial offer, an exchange could harm significantly or entirely the liquidity of its competitor.

To develop a new product, any other exchange requires the support from [REDACTED] market makers/liquidity providers or others. [REDACTED] A new product will only be successful if market participants are able to find sufficient liquidity on the platform. The continued success of a product is dependent on support from this limited set of companies. These companies plus the top five contributors are therefore critical to the competitive position of the any market operator in every product or market in which it is active or has just entered.

ICE would have a huge incentive to identify early supporting adopters of competitors products and engage with them in order to support an alternative ICE offering. This would only require the flow of a few words to ICE (i.e. the customers' identities). Of course, Trayport would also have the incentive to obtain additional information (e.g. measuring the bid/ask spreads that particular customers are posting

[REDACTED] in a particular product to measure the market making activities of these customers, in order to offer an alternative) to increase the likelihood or magnitude of harm [REDACTED]

Further, in developing a new product, the any entrance must engage at an early stage with Trayport to ensure the relevant software development and to develop the processes required for listing on Trayport. If ICE were to be aware of any plans to develop a new product, ICE could take this idea and develop it itself. As Trayport is always informed about the targeted launch date, Trayport could potentially slow the process for listing this new product, in order to give ICE sufficient time to develop a competing product. This could be very harmful as the most difficult liquidity to win is the initial liquidity. This concern is true whether the exchange (or the broker) is using the Trayport back-end or not. Indeed, if customers continue to use the Trayport front-end, the need to discuss new initiatives with Trayport will remain.

Importantly, this would not just affect the competitors ability to enter that particular market but it would fundamentally alter its incentives to innovate, develop new products and enter new markets. These new products, which may be completely new to the market, offering entirely new risk management, hedging and trading benefits, are not just niche volumes. On the contrary, new products can go on to become significant sources of revenue within only a few years, if the right product is developed and where it exploits substantial latent demand. The reduced innovation – and the reduced competition to innovate – would have a much wider impact on the scope of future risk management and hedging benefits in the market.

This information – minimal and innocuous as it may seem, possibly involving a few words revealing top customers or the nature/timeline of a new initiative – is something that could easily pass from Trayport to ICE and would be extremely difficult to prevent. These flows of information, sometimes inadvertently, take place on a day to day basis during the normal course of business, especially if ICE and Trayport share the same premises or the same management.

Due to the importance of liquidity, redress for this type of information exchange **cannot be sought ex-post through contract law** as this would be too late. The damage to the market position of the competitor will have already been done, rendering contractual protections effectively meaningless. Further, given the type of information at risk, it would very difficult for a competitor to even detect and prove that a breach of contract (a flow of information) had even taken place. This would also make any monitoring provisions to ensure separation very costly.

A detailed assessment of the incentives and impact of this sensitive information being used by ICE is not considered in this response. The incentives for ICE to undertake these activities are self-evident. The gains would be enormous while the losses relate to the limited chance of a contractual dispute being resolved successfully in the competitors favour and any associated reputational damage to ICE, which given its current reputation and that the dispute would be between two strong competitors seems negligible. The impact would be to remove the competing exchange from particular markets.

6. INCENTIVE TO FORECLOSE

Competitors have assessed the likely extent of losses and gains resulting from its foreclosure. Importantly, however, the assessment of the overall incentive to foreclose must take into account the cumulative gains to ICE from all of its potential foreclosure targets. Across a large number of markets, the gains to ICE from foreclosing competitors would be significant. However, in addition to these gains, ICE would also gain from other foreclosure targets. It is these overall gains that must be considered.

[REDACTED]

6.1. Losses to competitors from reducing the quality of Trayport

The losses to ICE/Trayport will be minimal. Under any of the foreclosure strategies outlined, while the harm to competing exchanges could be significant, the extent to which this would motivate any switching away from Trayport is very limited. This is due, partly, to the absence of alternatives to Trayport as outlined above but also to the fact that while traders would be able to easily shift from one exchange to another *on* Trayport, a trader will not switch away *from* Trayport.

A cumulative foreclosure strategy may bring with it additional risks. For example, if ICE were to foreclose all brokers and all exchanges, clearly there would be stronger motivation for them to collectively develop an alternative. However, as set out in detail above, this would be risky, expensive and time consuming and previous attempts to develop such an alternative have failed.

6.2. Gains to ICE from shifting trading volumes

The gains will be determined by the losses to the competitor, which in turn depend on the extent of harm caused. The greater the harm, the more volumes will be lost. Given the foreclosure strategies outlined above, the harm that could be inflicted could be substantial and affect a significant proportion of the competitors volumes. The extent of the gains will also be determined by the proportion of those volumes that ICE stands to gain. An assessment of the scale of these diverting volumes must take account of the fact that liquidity drives liquidity and any direct volume loss will be a lower bound for the actual resulting volume loss. The gains include both the exchange fees from order book trading and the associated clearing fees of those trades⁹ and should take into account the extent to which ICE could raise fees following the weakening of the competitor.

[REDACTED]

While the full extent of harm is unclear and the extent of competition between other venues and ICE will vary across these markets this analysis is illustrative and is intended only to demonstrate the very clear incentives ICE has to foreclose competing exchanges. Nevertheless, it is important for the CMA to consider that in many of these markets the competition between ICE and other venues is fierce and they are strong and close competitors, vigorously competing against each other for volumes,

[REDACTED]

Given the minimal risk of losses ICE would face, **it would not require significant gains at the trading and clearing levels for such a foreclosure strategy to be profitable.**

Importantly, this analysis also emphasises that foreclosure by ICE can potentially be targeted towards specific markets and, even within these markets, specific products and contracts. Given the foreclosure strategies outlined above, this would be technically feasible and [REDACTED] that post-merger ICE is likely to target specific markets where it believes it can maximise *long-run* gains (i.e. inflict damage that has the greatest *long-run* impact on competitors).

[REDACTED]

[REDACTED]

6.3. Gains to ICE from innovation and new product development

The gains to ICE from reducing the incentive of competitors to innovate are more difficult to estimate but could potentially be two-fold.

Based on the foreclosure strategies outlined above, ICE could potentially capture a significant proportion of the revenue from new product development [REDACTED] In some instances, such as opening up a new

⁹ The CMA requested details on profits from clearing and profits from execution. These are provided at Annex 3.

market, ICE may be racing against others to develop a product and open that market by obtaining the initial liquidity [X]

More generally, however, there will be ongoing development to bring new products to market and to improve existing products. Based on the foreclosure strategies outlined above, solely by reducing competitors revenue streams and profitability (including in its more developed markets), ICE can hamper its ability and incentives to innovate and introduce new products and open up other markets and reduce its incentives to invest, to reduce costs and improve product quality.

These new products or product enhancements can tap into latent demand or open up new possibilities for risk management and hedging that can lead to significant sources of revenue.

[X]

6.4. Difference in incentives with BGC/GFI

The incentives for ICE to use Trayport to foreclose competitors is significantly greater than that for BGC/GFI.

- In recent years, the European Energy Market has developed rapidly and Trayport has become a lot more embedded with traders therefore reinforcing the ability to perform such foreclosure. In particular, Trading Gateway has become far more widespread as the number of venues and the need to compare them has increased (there are now 7 major OTC brokers and 4 main competing exchanges with ICE, EEX Group, CME and Nasdaq). More importantly, the Trayport Clearing Link did not exist in 2007 and now constitutes the main route for trades to be routed from brokers to exchanges/clearing houses.
- GFI was neither an exchange nor a clearing house. Thus by foreclosing an exchange GFI would also not guarantee the trading volumes went to BGC/GFI as they may have been more likely to switch to another broker. Moreover, and contrary to ICE, if a part of this volume would have switched to GFI, GFI would have only gained broker fees and not clearing fees, limiting the financial interest of foreclosing exchanges. More importantly, BGC/GFI work closely with exchanges in the area of broker cleared trading where both work together to develop new markets with separate revenue streams for each. There is often a mutual interest in building liquidity as both gain from this.
- The amount of the Trayport acquisition was considerable compared to the market capitalisation of GFI. Over time, the profit of Trayport became of the same magnitude of the GFI Group profit, therefore creating a high risk of GFI disrupting the Trayport model to its advantage.

Further, is it possible that BGC/GFI may well have been foreclosing competitors through a nuanced strategy that benefited it most. A completely independent Trayport would see that the development of markets towards the screen would require them to open the API to give more flexibility. A Trayport independent of exchanges or brokers would have an incentive to have an open API to encourage demand on to the Trayport screen. The relevant counterfactual for assessing the merger is neither BGC/GFI nor ICE's ownership, therefore we would expect an independent Trayport to open the API.

7. EFFECT ON COMPETITION

In many markets a competitive position means that a foreclosure alone would lead to significant harm to competition. However, the assessment of the impact on competition must take into account the cumulative impact of ICE's foreclosure of exchanges and brokers and the overall harm that would result from foreclosing all of the potential foreclosure targets. It is this overall impact that must be considered.

[X]

Foreclosure will significantly lessen competition on specific products and markets

The impact on competition from foreclosing other trading venues will be driven by the extent to which ICE can weaken it. Based on the foreclosure strategies outlined above, ICE will have the ability to foreclose from others a significant proportion of its existing volumes. This initial direct effect will be exacerbated by the network effects present in exchange trading: first, as volumes are lost to the competitor, it is very difficult to win these back; and second, as volumes are lost this leads to a less attractive proposition for traders (a less appealing bid-ask spread) which can lead to further losses. The initial damage inflicted is therefore multiplied and can have a long-term impact on the competitive strength of the foreclosed exchange.

In many products and markets, and for particular contracts within those markets, [REDACTED]

This is important as the impact on competition may vary between products and markets. [REDACTED]

By diminishing its closest competitors, ICE can therefore significantly weaken the competitive constraints it faces. Such a reduction in competitive constraint would give ICE the ability to increase fees or diminish its quality of service. In many products and markets, where others have a strong position so that it is clear that, should it be harmed, the merger will give rise to reduced overall competition in those products. [REDACTED]¹⁰. [REDACTED]

In other products, ICE is the most likely potential entrant against the others and has made efforts to expand its volumes against it. The foreclosure strategies available to ICE mean that in these circumstances, ICE could harm competitors by foreclosing a significant proportion of its volumes and that it would still expect to capture a significant proportion of these itself by providing an alternative offering. In other products, where competitors are attempting to win volumes from an established ICE, any likelihood of success and the competitive constraint that arises from that likelihood will be removed. The loss of such a constraint can only reduce competition.

To estimate the impact on traders, the CMA should assume that the reduced competition enables ICE to increase its trading and clearing fees on order book volumes by 10%. This is a conservative estimate as ICE would just have hobbled its closest competitor in many instances. Under this scenario, the harm to traders would be of an order of magnitude of tens of millions of Euros.

Foreclosure will have much wider impacts on investment incentives and on the European Gas and Power Sectors

In addition to the loss of competition from volumes switching to ICE [REDACTED] there is also an impact on the competition for innovation and on the competitors incentives to innovate and invest in new product development.

This is two-fold. First, the foreclosure strategies outlined above can directly affect the competitors expected return on an investment. For example, if a product launch is delayed, there are initial technical difficulties in launching the product on Trayport, or ICE is able to list the new product quicker and enter against the competitor, this will reduce the investment return. As a result of this reduced return, the incentive for others to invest in new products is reduced.

Second, competitors fund product enhancement and new product development – including the initial loss-making phase on entry or expansion of trying to build liquidity – through its revenue streams on its developed and profitable products. If ICE is able to reduce the volumes in these more developed products and reduce their profitability, it will also reduce the scope for competitors to make such investments. There have been numerous examples of product enhancements and new product

¹⁰ [REDACTED]

developments – that have benefitted traders – that could not have taken place without the investment funded by revenue streams in the core developed markets.

It is important to consider each of these potential consequences in the wider market context. Derivatives markets are characterised by significant and rapid innovation. This financial innovation brings with it enormous benefits in more effective risk management and trading opportunities for customers. Illustrative of this is the fact that exchange-based trading in power and gas derivatives has only become widely prevalent over the last ten years or so and with it the emergence of increasingly complex contracts. Moreover, much of the technological advancement and innovation that is taking place is being driven by exchanges which are opening up new pools of liquidity. The role of exchanges in financial derivatives trading innovation is pivotal. By reducing competition between exchanges, this innovation is put at risk.

It is even more important to consider the potential consequences of this merger in the context of the wider evolution of the European gas and power sectors. These sectors are currently experiencing their largest transformation in their history with two main trends: the creation of a harmonized and unified internal gas and power market across all EU member states; and shift away from fossil fuels toward renewables. In order to accomplish these objectives, markets have been playing, and will continue to play, a key role in bringing together the relevant stakeholders. In particular, gas and power exchanges have led this transition by providing the innovative tools that have allowed and facilitated these trends to occur.

On power spot, exchanges have led the innovation, development and delivery of advanced market-based mechanisms – known as “market coupling” – to facilitate cross-border flows across countries and spread the risk of intermittent renewable (e.g. wind, solar) production across countries. On the intraday, power spot, exchanges have also introduced close to real time markets (15min products) to balance the flexibility and unpredictability of renewable sources and cross-border mechanisms to share these risks and opportunities across different neighbouring markets. [X]

[X]

[X]

8. FORECLOSURE OF CLEARING SERVICES

8.1. Ability to foreclose

Background to clearing services

[X]

There are two aspects to the provision of clearing services: exchange-traded (or order book) clearing services and broker cleared (or trade registration) clearing services.

Exchange-traded clearing services

Regulatory provisions require that all trades undertaken on an exchange must be cleared. [X] Trades undertaken on exchanges will also automatically be cleared on each exchange’s registered clearing house.¹¹ As a result, the trader in choosing to undertake a trade on an exchange order book is also simultaneously choosing the clearing house that it will use. By choosing the exchange and clearing bundle, any foreclosure strategy that reduces order book trading volumes (and revenues) will also

¹¹ [X]

reduce the clearing volumes and revenues associated with those trades. By disrupting trading volumes ICE has the potential to gain both trading and clearing volumes. The foreclosure of these order book volumes will be driven by the foreclosure of the Trayport front-end and back-end and is considered above. These are considered separately above for analytical purposes only; many foreclosure strategies can be undertaken simultaneously.

Broker clearing services

In other instances, the trader will undertake the trade through a broker. The broker will match the trade and the trader has the choice to initiate STP to different clearing houses. The broker cleared volumes are subject to both a trade registration fee with the exchange and a clearing fee with the clearing house so that any disruption to STP will impact both clearing volumes and trade registration volumes.

Brokers have a choice in supporting/promoting the products of the exchanges and clearing houses that they access on behalf of their clients. Brokers are incentivised by exchanges/clearing houses to favour support and promote their products. The traders decide to place their bids according to their own preference of trade registration and clearing, which will include an assessment of the clearing efficiencies outlined above and the trade registration and clearing fees, which are borne by traders as counterparties to the transaction. While a trade requires agreement between the buyer and seller on the exchange/clearing house to clear the trade, the broker can intermediate, buying from the seller at one exchange/clearing house and selling to the buyer at another. Alternatively, if the buyer, seller and broker have several exchanges/clearing houses available for a given transaction, a ranking may come into effect that determines the exchange/clearing house used.

Competition for clearing services

There are network effects in relation to clearing and settlement. Traders benefit from economies of scale and scope when they consolidate their assets in a single clearing house, including:

- the scope for more efficient portfolio optimisation as transaction costs on asset reallocations are lower, allowing traders to hold less collateral; and
- greater potential for balance sheet netting, which allows traders to reduce the amount of reserve capital they need to hold.

These network effects inevitably create switching costs that would be expected to lead to more concentrated markets than would otherwise be the case. However, in clearing these switching costs do not preclude the strong competition between clearing houses that currently takes place. As outlined above, in addition to competing as part of a package for order book trading volumes, clearing houses also actively compete to clear the trades that are matched by brokers. Partly as a result of this separate and additional demand, the competition between clearing houses for broker cleared trades can be stronger than the competition between exchange order books.

Trayport's STP link is increasingly critical to clearing volumes

The importance of the Trayport STP link has increased dramatically over the last year or two.

A significant proportion of the [REDACTED] broker cleared volumes are initiated through Trayport's STP Clearing Link. [REDACTED] Volumes not through an STP are negligible and decreasing. As result, any disruption to the STP link has the potential to reduce clearing volumes significantly. Clearing houses compete vigorously with each other on fees and quality of service.

[REDACTED]

Table 3: [X]12,13

Significantly, the importance of the Trayport STP link has increased dramatically over the last two years. [X] Across all products, the proportion has at least doubled. This is expected to continue so that the Trayport STP link becomes increasingly embedded in trader systems. The STP link is a recent development that has significantly improved the efficiency of the overall process for traders

If the STP link to a particular clearing house was disrupted, traders would not switch away from using the STP link. Instead, traders would maintain the STP link but switch clearing house. The Trayport STP link is therefore critical. The elasticity of demand for the clearing house is far greater than that of the STP link process and technology. As a result, a disruption to the STP link to a particular clearing house has the potential to significantly reduce the volumes of a clearing house.

This latter point is important as while Trayport/ICE may be technically to blame for the disruption, traders will only notice the reduced quality in the competitor's offering and it will be the competitor that switches away, particularly given the lack of alternative to Trayport (both the STP link and Trading Gateway).

If the quality of service of a clearing house was to be diminished, there would be the immediate impact on volumes arising from the disruption but also over time traders would move all of their volumes away from that particular clearing house as it is very important for a clearing house to offer a stable, well-functioning process. However, even these figures underestimate the significance of the STP link to clearing volumes for a number of reasons.

[X]

Available alternatives are in decline and will become obsolete

The clearing of broker-traded volumes can be done manually with the clearing house and this is how it was done prior to the STP link. Exchanges still also allow trades to be registered manually at the exchange.

However, these manual trade registration platforms are not embedded into broker back-ends, or in the Trading Gateway interface of traders. The requirement for manual entry makes the process long and burdensome for brokers and traders. As a result, manual trade registration is barely used by brokers any more.

Considering the operational burden, the manual platforms will stop being used as traders switch to the Trayport STP Clearing link. Indeed, as the evidence above shows this change is happening very quickly. the volumes which now go through STP link, and the volumes that will shift to doing so in the near future, means that there will never be a return to manual registration so long as the option of the STP link is there.

In addition to manual registration, there are three alternatives to Trayport's STP link: eXRP, Trigonal, and Cleartrade. On an individual basis, all three (theoretically) could potentially offer comparable functionality to Trayport (currently they do not as outlined below). However, in reality all three are weak options.

First, the network effects of Trayport mean that using another one would be very inconvenient for a trader and the incremental costs of using one in the day-to-day operations of a trader would be very high. These network effects reduce the scope for any alternative to Trayport to be feasible.

12 [X]

13 [X]

Second, as Trayport has a closed API system, EFET.net and the other alternatives are always dependent on Trayport as Trayport’s BTS back-ends are only accessible to traders via Trayport front-ends. Brokers continue to use Trayport’s back-end technology through Trayport’s Broker Trading System (**BTS**). Additional internal programming at the broker end is necessary to connect any of the STP solutions to the front-end BTS. The eXRP solution is used by only one of eight brokers who are using STP.

[REDACTED]

Even following this investment, there is still a risk that Trayport will refuse usage of the API for brokers processing their trades via EFET.net eXRP. Trayport could reduce the scope of functions which it allows to be used or could increase the prices for using the API. Any other potential alternative would similarly face these circumstances.

Finally, and most significantly, the Trayport STP link offers better functionality. For example, it is better able to reinsert the clearing status into the BTS where clients can retrieve it easily. In contrast, eXRP does not allow for the clearing status to be reinserted into the BTS, so clients lack an important piece of information. [REDACTED]

Table 4: [REDACTED]^{14,15,16}

[REDACTED]¹⁷

8.2. Foreclosure strategies and contractual problems

Clearing market characteristics make total foreclosure a possibility

[REDACTED] Partial foreclosure would involve a disruption to the Trayport STP link. This could be blocking or disrupting the connection for brokers to register at exchanges or it could involve slowing down the feedback from clearing, which is also very important.

Total foreclosure would involve removing one or several competing clearing houses as an alternative for brokers or traders when initiating STP.

[REDACTED]

Competitors do not believe its existing clearing link contract with Trayport provides it with sufficient protection from these foreclosure strategies. [REDACTED]. Further, the specific provisions within the contract would allow for disruption to the STP link. The specific provisions within the contract, and the concerns over the extent to which a competitor could detect and obtain redress, are very similar to those outlined in Section 3.3 above so are not repeated here.

8.3. Incentive for Trayport to foreclose and effect on competition

The incentive for ICE to use Trayport to foreclose clearing volumes is determined by whether the gains in revenue from clearing volumes (i.e. trade registration and clearing volumes) switching from competitors to ICE, as a result of the foreclosure strategy, outweigh the losses, taking account of the uncertainty of gains and losses associated with pursuing such a strategy.

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

Losses from foreclosure

Partial foreclosure

The losses to ICE/Trayport will be very limited, given the strength of Trayport and the emerging strong preference for the STP link. This would not have been the case only a year or two ago, prior to the STP link being embedded and so strongly favoured by those that use it. However, due to its quick adoption, and the closed API of Trayport, the losses to ICE/Trayport are likely to be very limited. As outlined above, the preference of traders for the STP link is so strong that for those that have switched to it they would not switch away; should they be unhappy they would be far more likely to switch to a different clearing house to maintain use of the STP link.

In addition, the potential losses to ICE/Trayport are even more limited than in the foreclosure of front-end and back end services (i.e. exchange trading and associated clearing volumes) as any risk that a collective foreclosure of brokers and exchanges would diminish the quality of Trayport and risk switching away –the prospect for which as outlined above is very limited in any event – the service would be diminished for traders who would be unable to identify the causes for this nor would they have any motivation to switch away from Trayport for this. Brokers would be unaffected as they do not pay the trade registration and clearing fees so the risk of switching away from Trayport, limited in any event, would be negligible.

Total foreclosure

If ICE removed other clearing houses from Trayport so that brokers and traders could only clear through ICE Clear, any attempt to maintain alternatives available on Trayport must be instigated by brokers. Brokers have an incentive to maintain alternatives as they are rewarded for supporting and promoting an exchange and clearing house but these are limited in comparison to the fee revenue gained from traders. Any reduction in these incentives to brokers could be easily offset through an increase in fees to traders. Traders would be unable to shift away from Trayport for other reasons. Development or sponsorship of an alternative would require brokers to establish an alternative route, investing significantly in an advanced solution, which is prohibitive from a cost perspective at the moment because there is no easily accessible alternative available.

As a result, the additional losses from pursuing a total foreclosure strategy compared to merely a partial foreclosure strategy are limited.

Gains from foreclosure

The gains from foreclosure will be determined by the extent to which ICE captures the foreclosed trade registration and clearing volumes (the combined lost volumes from all foreclosure targets) and the extent to which the lost competition then enables ICE to raise its fees on these captured (and existing) volumes.

To estimate the gains from foreclosure, [X] in **Table 5** below. As before the full extent of harm is unclear a total foreclosure scenario is not unlikely for broker cleared volumes. Further, ICE has the ability to simultaneously foreclose all exchanges and clearing houses for trade registration volumes. In some markets there is only one competing clearing house to ICE. As a result, the losses to the competitor could well be 100% of its volumes and the gains to ICE could well be 100% of those foreclosed volumes. As before, this analysis is illustrative and intended to demonstrate the very clear incentives ICE has to foreclose other exchanges and clearing houses. Given the minimal risk of losses ICE would face, it would not require significant gains in clearing for such a foreclosure strategy to be profitable.

[X]

As before, this analysis also emphasises that partial foreclosure by ICE can potentially be targeted towards specific markets and, even within these markets, specific products and contracts. This is less

the case for total foreclosure where ICE may find it much more difficult to pick and choose removing a clearing house entirely from Trayport.

For the purposes of our analysis, we have used ICE's current fee schedules. As before, the revenues are broadly representative of the profit margin that ICE will receive on the incremental volumes that it gains through foreclosure as incremental costs to trading and clearing are minimal. While changes to pricing are determined less by these incremental costs in this context, the fixed costs are already borne by ICE where it is active so these revenues will represent incremental profit. This analysis will underestimate the incremental profit to ICE as the loss of competition will enable ICE to increase its fees or reduce its cost base (affecting both existing and new volumes).

In light of this, the total potential annual profit gains to ICE of [REDACTED] must be set alongside Trayport's total annual profit of only around €24 million, suggesting that the incentive to foreclose trade registration volumes is unquestionable. [REDACTED] This takes no account of the additional impact on innovation.

Table 5: [REDACTED]

Notes: Volume figures are based on data for Jan to Jun 2016 and extrapolated to full 2016

ICE fees are [REDACTED] as of July 2016 as published on ICE website.

8.4. Effect on competition

The impact on competition from a partial foreclosure strategy is to significantly reduce the competitive threat faced by ICE. Where only two clearing houses are active, foreclosure would significantly diminish *the only competitor* to ICE. Even where there are multiple exchanges, ICE could partially or totally foreclose them all, significantly harming competition. The loss of this competition would immediately lead to increased trade registration and clearing fees for traders. [REDACTED]

As set out above, the prospect of traders switching back to manual trade registration is fanciful. Further, other alternatives would generally have to be developed by brokers which would (potentially) not be subject to direct harm not traders.

The impact on competition of a total foreclosure strategy is absolute. For broker cleared volumes ICE would have a monopoly and trade registration and clearing fees would increase towards the monopoly level, subject to avoiding any incentive for brokers and traders to develop an alternative.

9. REMAINING QUESTIONS OF THE CMA

[REDACTED]