



Response to the SEM Committee's Consultation on Liquidity

Prepared for the Viridian Group

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Executive Summary

Introduction

The SEM Committee (“SEM-C”) has published a consultation document proposing measures to promote liquidity in the I-SEM forward market. In the Consultation, the SEM-C argues that liquidity in the forward market is necessary to promote competition in the Irish electricity market, and that a lack of liquidity may warrant intervention.

The SEM-C proposes five options to resolve the lack of liquidity in the Irish market:

Option 1: Improvements in the trading environment facilitated by improvements in trading platform, market clearing and central credit provision, all of which are being investigated in a separate process; it is considered that this will be of benefit regardless of any other measures taken.

Option 2: A [Forward Contract Sell Obligation (“FCSO”)] on generators to ensure more hedging products are available in the market.

Option 3: A FCSO supplemented by removal of ring-fencing on ESB/[Electric Ireland (“EI”)], the latter being traded-off against distribution of continued Directed Contracts [(“DCs”)] being allocated to all supplies except Electric Ireland and enforcing a greater proportion of FCSOs from ESB than from other generators;

Option 4: A [Market Maker Obligation (“MMO”)] on the four largest businesses in the market to provide liquid trading opportunities to the whole market; it is expected that removal of ring-fencing will enhance ESB’s ability to provide a market maker service to the market; and

Option 5: A hybrid of options 3 and 4 to both ensure that additional hedging contracts will be provided by generators with a market maker function to facilitate tradability of those (and other) instruments.”¹

This report forms our expert response to the SEM-C’s basis for intervening and to its proposed policy interventions, in particular Options 2 to 5, which are the focus of the Consultation.

The SEM Committee’s Proposed Interventions Fail to Identify the Underlying Market Failure or Demonstrate that the Benefits of Intervention Exceed the Costs

The SEM-C’s Consultation is poorly founded. Liquidity, however the SEM-C defines it, is the by-product of a competitive industry. Implementing a measure that increases a particular measure of liquidity does not improve competition, which is the SEM-C’s ultimate goal.² SEM-C’s efforts would be better focused on using forward contracts to mitigate ESB’s market power and to transfer title over generation from ESB to suppliers who are short of

¹ SEM Committee, *Integrated Single Electricity Market (I-SEM) – Measures to promote liquidity in the I-SEM forward market – Consultation Paper* (SEM-16-030), p4.

² SEM-16-030, p8.

generation. This would allow non-dominant companies to compete on an equal basis with ESB and will ultimately lower prices for consumers.

Although the Forwards and Liquidity (“F&L”) Workstream cannot hope to promote a liquid market, it can help traders compete more effectively by helping to provide a level playing field for hedging. The SEM-C’s dismissal of market power in the forward market is an oversimplification. In particular, the SEM-C’s position is based on a misunderstanding of effect of hedging, the costs of adopting a speculative contract position, and the consequent barriers to entry into forward markets.

Measures to promote liquidity are not costless and are not guaranteed to produce a positive net benefit for society. Many of the interventions proposed in the Consultation would impose additional costs and risks on the affected companies. Often, this burden would be felt more heavily by non-dominant companies with a less diversified portfolio of generation, a side-effect that is harmful to competition. To justify each intervention, therefore, the SEM-C would need to provide objective evidence not only that each measure is “aimed” at a problem, but also that each measure is likely to produce a well-defined and beneficial outcome whose benefits exceed the costs of intervention.

The Forward Contract Sell Obligation (Options 2 and 3) Is Not Targeted Enough

The purpose of the FCSO needs to be restated and its design reconsidered. Rather than aiming at nebulous or arbitrary measures of liquidity, the FCSO is better used to create a level playing field in (ie. to equalise) suppliers’ access to hedging products.

The FCSO can achieve this redefined purpose primarily by allocating contracts for the forecast generation of the dominant firm among a number of market participants. The FCSO can also constrain the market power of the dominant player (to the extent that it cannot influence forward contract prices by manipulating spot market prices). Option 2 should therefore be focused on ESB, but its extension to others needs to be justified.

Imposing the FCSO on other generators will not produce any beneficial increase in “liquidity”, but would have to be justified by the need to equalise access to hedging products. Some of the generators awarded an FCSO in the current proposal will need to sell all their generation anyway, as they have no supply business; the FCSO would only have any effect if it encourage these generators to replace spot sales with forward sales. Justifying such an extension would require evidence that these generators were relying disproportionately on spot sales to dispose of their output.

Where a company starts with a negative net position (generation less than retail sales), forcing it to sell forward contracts would expose it to additional costs and risks, and to new regulatory burdens, which would harm competition. Omitting such cases from the FCSO would not undermine its redefined purpose of equalising suppliers’ access to hedging products

If the SEM-C does eventually decide that the FCSO should include generators other than ESB, the design of the contract portfolio would have to be more closely tailored to each generator’s own characteristics, to avoid accusations of discrimination.

Under the FCSO auction proposed by the SEM-C,³ EI may have the ability and incentive increase the auction clearing price for all suppliers by increasing the size of its bid. If DCs are allocated through an auction, ESB will be able to exercise its market power, both through its generation arm and its supply arm. To achieve the SEM-C's objectives, the means for allocating FCSOs and DCs must prevent ESB Generation or EI from abusing market power.

Under Option 3, the expansion of ESB's FCSO and the exclusion of EI from DC auctions should be considered as potentially desirable amendments to Option 2. However, ESB Generation would still have the opportunity to abuse its market power in a DC auction. Furthermore, the removal of ring-fencing seems not only undesirable, but also unnecessary, given the widespread recognition of ESB's special status in various other measures.

The Market Maker Obligation (Option 4) Imposes Unnecessary Risks and Costs Without Evidence of Offsetting Benefits for Consumers

The MMO attempts to treat the symptom rather than the cause of illiquidity. In particular, the MMO does not address the structural shortage of hedges in the I-SEM or the existence of a dominant market participant with a balanced portfolio. As a result, the MMO offers no guarantee of access to forward contracts at reasonable prices. Lack of access to forward contracts limits new entry in generation and supply and may encourage the exit of existing market players. Moreover, because of ESB's position and the unnecessary and asymmetrical risk imposed by the MMO, competition in the I-SEM is likely to worsen as a result of its introduction.

The SEM-C does not provide detailed reasoning to support imposing a MMO in the I-SEM and instead relies on precedents from Great Britain and New Zealand. The market structures in Great Britain and New Zealand are markedly different to those in the I-SEM. Moreover, in Great Britain the evidence on whether the MMO has improved liquidity is mixed. The SEM-C does not therefore have robust evidence either for the specific design of MMO or for asserting that the imposition of an MMO will achieve its stated aim of increasing liquidity in the I-SEM.

In practice, imposing an MMO is likely to impose significant costs and risks on market participants. The SEM-C has not considered the costs and risks associated with the MMO, in particular the potential increase in the cost of capital, which could increase prices for consumers.

The FCSO/MMO Hybrid (Option 5) Does Not Remove the Risks of Each Component, and Limits the Effectiveness of the FCSO

The SEM-C's Option 5 comprises a hybrid of the FCSO and the MMO, with the obligations on each half as large as in the pure policy options. The underlying flaws of each component remain in the hybrid version. Moreover, the hybrid option also limits the possible benefits present in the FCSO: the lower obligation to sell power forward may reduce access to hedging for suppliers who are short and thus hinder competition in the retail market.

³ SEM-16-030, pp49-31.

The Removal of the Ring-Fence is Unnecessary and Hinders Competition

In Options 3, 4 and 5, the SEM-C has proposed variants that remove the ring-fence between ESB-Generation and EI. It is not clear why this element of the proposal is necessary to the functioning of either of these obligations. Removing the ring-fence can only reinforce ESB's dominance and hinder competition.

The SEM-C and their consultants have previously concluded that ring-fencing is important for maintaining liquidity and protecting consumers' interests. Any proposal to remove the ring-fence would have to demonstrate either that changes in market conditions since their earlier work in 2010-12 had overturned the original case for ring-fencing, or that removing the ring-fence was necessary to achieve certain benefits that were not considered in 2010-12. The Consultation provides no such justification for removing the ring-fencing of ESB-Generation and EI.

Conclusion

We find that the policy options set forth in this consultation document are poorly-developed and focus on the symptom (illiquidity) of a problem rather than the problem itself (market power). As we have indicated throughout the report, the SEM-C should instead target policy interventions in forward markets in way that improves the competitive structure of wholesale and retail markets in the I-SEM, by providing a level playing field in suppliers' access to hedging.

1. Introduction

On 17 June 2016, the SEM Committee (“SEM-C”) published a consultation document proposing measures to promote liquidity in the I-SEM forward market (the “Consultation”).⁴ In the Consultation, the SEM-C argues that “the need for liquidity to flexibly cover [...] long-term risks is [...] evident for a competitive market and so any expected lack of liquidity may be investigated as a potential market failure warranting intervention”.⁵

The SEM-C proposes five options to resolve the lack of liquidity in the Irish market:

Option 1: Improvements in the trading environment facilitated by improvements in trading platform, market clearing and central credit provision, all of which are being investigated in a separate process; it is considered that this will be of benefit regardless of any other measures taken.

Option 2: A [Forward Contract Sell Obligation (“FCSO”)] on generators to ensure more hedging products are available in the market.

Option 3: A FCSO supplemented by removal of ring-fencing on ESB/[Electric Ireland (“EI”)], the latter being traded-off against distribution of continued Directed Contracts [(“DCs”)] being allocated to all supplies except Electric Ireland and enforcing a greater proportion of FCSOs from ESB than from other generators;

Option 4: A [Market Maker Obligation (“MMO”)] on the four largest businesses in the market to provide liquid trading opportunities to the whole market; it is expected that removal of ring-fencing will enhance ESB’s ability to provide a market maker service to the market; and

Option 5: A hybrid of options 3 and 4 to both ensure that additional hedging contracts will be provided by generators with a market maker function to facilitate tradability of those (and other) instruments.”⁶

The Viridian Group commissioned NERA to review options 2 to 5. Our response comprises the following sections:

- Chapter 2 analyses the basis for the SEM-C’s proposed regulatory intervention.
- Chapter 3 discusses the proposed FCSO as applied in Options 2 and 3 of the consultation.
- Chapter 4 discusses the proposed MMO (Option 4 of the consultation).
- Chapter 5 briefly discusses a combination of a reduced FCSO and reduced MMO (Option 5 of the Consultation); and
- Chapter 6 concludes.

⁴ SEM Committee, *Integrated Single Electricity Market (I-SEM) – Measures to promote liquidity in the I-SEM forward market – Consultation Paper* (SEM-16-030).

⁵ SEM-16-030, p8.

⁶ SEM-16-030, p4.

Our conclusions are set out at the end of each chapter but can be summarised as follows:

- Liquidity, however the SEM-C defines it, is a by-product of a competitive industry. Implementing a measure that increases a particular measure of liquidity does not improve competition in the SEM or I-SEM.
- The FCSO proposed under Options 2 and 3 is unlikely to lead to a sustained increase in liquidity, imposes unnecessary risks on obligated parties beyond ESB, and reinforces the anti-competitive forces present in the SEM. Refocusing the FCSO on the dominant firm and, if necessary, companies with a surplus of generation, would better target its impact on providing suppliers with access to hedging products.
- The MMO proposed under Option 4 imposes unnecessary risks on obligated companies, especially those in a net short starting position as they may be forced into unwanted sales. The additional risk may increase the cost of capital for affected companies. The MMO reinforces the competitive asymmetries present in the SEM, and provides ESB with an additional avenue to exercise market power.
- The hybrid Option 5 combines Options 3 and 4, whilst reducing the obligation of the FCSO and the MMO from their pure versions. The inclusion of the FCSO does not negate the flaws of the MMO, and vice versa. By reducing the size of each obligation, however, the SEM-C reduces the risks associated with Options 3 and 4. However, the hybrid option also limits the possible benefits present in the FCSO: the lower obligation to sell power forward may reduce access to hedging for suppliers who are short and thus hinder competition in the retail market.
- In Options 3 to 5, the SEM-C has proposed the removal of the ring-fence between ESB-Generation and EI. It is not clear why this element of the proposal is necessary to the functioning of either of these obligations. Removing the ring-fence can only reinforce ESB's market dominance and hinder competition. This is consistent with previous work commissioned by the SEM-C regarding the ring-fence.

2. The Basis for Intervention

The SEM-C uses as a starting point for its consultation the assumption that there is “a need for forward hedging instruments and that liquidity in trading these instruments [is] an important aspect of a successful market”.⁷ In this chapter, we challenge this basis for intervention. In particular:

- In section 2.1, we argue that liquidity does not have a single, clear definition, and that any attempt to improve a particular measure of liquidity will not actually improve liquidity;
- In section 2.2, we argue that the SEM-C has not identified the underlying market failure that prevents competition in the market and disadvantages consumers;
- In section 2.3, we describe the costs of speculation and explain why they disproportionately affect non-dominant companies;
- In section 2.4, we argue that the SEM-C should instead focus on identifying and correcting underlying market failures;
- In section 2.5, we discuss the implications of academic literature and other experiences of liquidity interventions on the SEM-C’s proposed interventions;
- In section 2.6, we propose alternative explanations for the flaws in the SEM;
- In section 2.7, we argue that the removal of the regulatory ring-fence is unnecessary and harmful to competition;
- In section 2.8, we review the SEM-C’s initial assessment of the options available to it; and
- We conclude in section 2.9.

2.1. The SEM-C Does Not Provide a Clear, Measurable Definition of Liquidity

The SEM-C describes a liquid market as one in which:⁸

- (1) parties can “trade ‘reasonable’ volumes without significantly moving market prices”; and
- (2) parties are “readily able to trade out of positions as well as to acquire those contractual positions”

These attributes are really absolute requirements or binary (yes/no) choices. However, the SEM-C follows the academic tradition of seeking measures of “relative” liquidity such as the level of transactions costs, traded volumes or “smooth” price changes, or other “broader” attributes such as market depth and breadth.

⁷ SEM-16-030, p3.

⁸ SEM-16-030, pp9-10.

The sheer number and variety of these relative measures of liquidity show that there is no agreed way to measure liquidity in an illiquid market, even if traders can spot a liquid market when one exists in absolute terms.

Consequently, regulators have no basis for arguing that forcing an increase in any of these measures will promote or create a liquid market. The causes of forward market liquidity lie deeper, in the conditions of the underlying physical market, and attempts to “improve the symptoms” by increasing some relative measures of liquidity will not overcome fundamental flaws in the underlying conditions and will not therefore promote liquidity.

That observation does not mean that no intervention is required in forward markets, merely that the purpose and design of the intervention derives from concerns other than market liquidity. Instead, intervention should have a different objective. Interventions in the forward market should be aimed instead at overcoming ESB’s dominance of generation and retailing, by providing a level-playing field for other companies requiring access to medium-term hedging products. This conclusion is explained further below.

2.2. The SEM-C Does Not Identify the Market Failure in the I-SEM

The SEM-C’s view of the need for intervention in forward markets is summarised in the following extract from the Consultation:

“Lack of liquidity limits the ability of new entrants and small firms to buy and sell electricity in the wholesale market and therefore limits competition in that market. It also limits the ability of existing market participants to increase their share of the market and their scope to provide the best possible deal for consumers. Because poor liquidity is also a barrier to the formation of signals to future prices it also acts as a barrier to investment, which will look to such signals to support its decisions.”⁹

This extract identifies two problems: (1) lack of liquidity hinders competition in wholesale and retail markets; and (2) the loss of prices signals hinders investment. The SEM-C then leaps to the following conclusions:

“Measures to promote liquidity will therefore facilitate new entry in generation and supply, reduce the ability of any market participant to manipulate the market, increase confidence in prices and thus facilitate trading and investment.”¹⁰

However, the chain of argument in this section uses faulty logic and the conclusions are therefore incorrect.

2.2.1. Competition is a pre-condition for liquidity, not vice versa

With regard to the first problem identified above (ie. “lack of liquidity”), measures to promote liquidity cannot overcome competition problems. Competition is actually a pre-

⁹ SEM-16-030, p7.

¹⁰ SEM-16-030, p7.

requisite for liquidity, since liquidity only thrives when information asymmetry is kept to a minimum:

“An increase in information asymmetry [...] generates an illiquidity spiral. Because illiquidity increases, liquidity demanders scale back their trades. This raises the signal per trade size, further increasing illiquidity. When information asymmetry becomes severe, illiquidity becomes infinite and trade ceases, leading to a market breakdown.”¹¹

“Information asymmetry” is the phenomenon whereby one trader possesses “private information” about a market, ie. information that others do not possess. That trader is better able to estimate the true value of the product and can profit from the ignorance of others through insider trading (by selling to those whose valuation of the product is too high, or buying from those whose valuation is too low). Competition can only blossom where financial institutions do not fear that insider trading may go against them (eg. because producers and consumers have better information about current conditions of supply and demand). Regulations such as REMIT try to eliminate this problem, by obliging traders to make public any information that affects prices before they trade.

A competitive market can function without forward market liquidity, as evidenced by all of the competitive retail markets for which there are no corresponding forward markets. However, forward market liquidity cannot survive in a market that lacks competition.

If (and only if) everyone is trading with the same information, financial institutions and others may feel able to adopt speculative positions in the physical, forward or derivative markets, and thus to boost liquidity. In an uncompetitive market, however, nothing can eliminate the information asymmetry inherent in the dominant firms’ knowledge of their own bidding strategy. General regulation of financial markets cannot overcome this problem. For instance, REMIT has nothing to say on the publication of information about the regulatory and pricing strategy of dominant firms. REMIT may oblige traders to report their trades, but withholding supply to raise prices requires a decision *not* to trade, which would not be reported. Uncompetitive markets conditions therefore do not provide the conditions necessary for the growth of liquid trading.

Regulating the behaviour of a dominant firm does not overcome this problem, since it only creates a new kind of information asymmetry. First, the bidding strategy of the dominant firms becomes a matter for privileged discussions with their regulator over the rules governing their behaviour. Second, even if the rules are published, their interpretation is often unpredictable (albeit within certain bounds), giving a dominant firm the advantage of knowing better than others how it will behave in the market and what prices will emerge. Therefore, regulation of dominant firms does not remove the underlying problem of information asymmetry.

Hence, in an uncompetitive market, information asymmetry over the dominant firm’s bidding strategy, whether or not it is regulated, undermines any prospect of a liquid market. Illiquidity is not a “market failure” waiting to be cured. It is merely a symptom of flaws

¹¹ Vayanos and Wang (2012), *Liquidity and Asset Returns under Asymmetric Information and Imperfect Competition*, p20.

lying deeper within the market. Trying to remedy a lack of liquidity will not address these underlying flaws – and will not succeed as long as the underlying flaws persist.

2.2.2. The proposed liquidity measures do not inform investment decisions

With regard to “the loss of price signals for investment”, the second problem identified above, price signals would only assist investment decisions if the forward curve went out many years into the future, into the period when new investments become active. Few “measures to promote liquidity” (and none of those actually proposed by the SEM-C) affect price discovery that far ahead, so they do not improve investment signals.

2.2.3. Implications for appraisal of measures

Thus, in a market characterised by dominance such measures to promote liquidity do not in practice “facilitate new entry in generation and supply, reduce the ability of any market participant to manipulate the market, increase confidence in prices and thus facilitate trading and investment”.¹² Instead, using the SEM-C’s own appraisal criteria, these measures will not be effective in promoting competition or liquidity, since the underlying problems of ESB’s dominance, regulation and informational asymmetry remain in place.

2.3. The SEM-C Has Misunderstood the Costs of Speculation

“Measures to promote liquidity” would at best be merely ineffective, if they were costless and failed to promote liquidity. However, imposing such measures on a range of market participants exposes them to a number of additional costs and risks. As a result, there is no guarantee that any such measure will achieve net benefits.

The primary source of costs arises from forcing speculative activities onto companies with a deficit (generation less than retail sales). At present, most energy companies are careful to ensure that their trading activities are devoted to hedging: (1) disposing of generation at prices that fix the margin over their fuel and fixed costs and/or (2) procuring electricity to supply their customers’ consumption at prices that fix the margin within their sales prices or tariffs. Companies that extend their trading beyond these limit operations are embarking on speculation: selling contracts without the generation to back them up, or buying contracts that are not required to supply physical consumption. Taking on such speculative contract positions would have major implications for the costs, risks and regulatory compliance burden of the companies concerned.

The nature of the costs is discussed in chapter 4 below in our consideration of the Market Maker Obligation. Some derive from the additional regulatory compliance burden, but some arise from purely commercial arrangements (such as debt covenants that limit trading activities). For small or undiversified companies in particular (ie. Energinet and SSE, whose generation portfolios are small, especially relative to the size of their supply arms), these costs are substantial enough to present an effective barrier to entry as a speculative trader (buying or selling a net contract position that exceeds their net physical position). These

¹² SEM-16-030, p7.

barriers to entry mean that the threat of new entry or of existing traders expanding the supply of contracts is not existent and does not effectively cap the prices that ESB, as the dominant firm, can charge for forward contracts.

Moreover, the risks arising from additional obligations to promote liquidity do not affect all firms to the same extent. A large and diversified dominant firm such as ESB is better able to handle additional risks than less diversified competitors. Measures that impose additional risks on a wide range of market participants will hinder the less diversified competitors, enhance the large, diversified firm's dominance, and harm consumers' interests by further hindering competition.

A good example of this disproportionate effect on risks arises from the discussion of hedging by fuel proxy. Large entities may be able to "cross-hedge", ie. to hedge fixed price sales of electricity with fixed price purchases of fuel in a different but correlated market, such as natural gas. This is known as "dirty hedging" in the case of electricity-gas cross-hedging. Because electricity prices are not fully correlated with gas prices, this cross-hedging does not fully stabilise a supplier's margin. Large diversified firms may have no difficulty absorbing the risk of electricity-gas price divergences. However, as Ofgem noted in the impact assessment for its Secure and Promote licence condition, "[s]maller players may find this approach to managing their risks particularly unappealing, especially as a firm using gas to hedge a physical power position would still have to purchase power at some point".¹³ For an independent supplier with low margins and few generation resources, even limited or infrequent divergences between electricity and gas prices would cause financial problems. It would therefore be desirable to eliminate small or non-dominant companies' reliance on "dirty hedging". If that is not possible in the I-SEM, because of the net shortage of electricity forward contracts, it would still be desirable to minimise reliance on cross-hedging, especially for the smaller or less diversified companies.

Thus, measures to promote liquidity are not a costless option that should always be adopted, in case they produce some benefits. The supposed benefits probably will not arise or will be very small in current market conditions. On the other hand, such measures impose costs that will be passed through to consumers and risks that harm competition (by favouring the large, dominant firm over non-dominant competitors). In these conditions, it would be unwise to adopt measures to promote liquidity without assessing the full range of their costs and benefits – which the Consultation has not done.

2.4. Diagnosis of the Problem and its Remedy

Liquidity is merely a symptom of underlying market conditions. Instead of trying to inflate measurements of this symptom, it would be beneficial to focus measures on overcoming the fundamental problem for competition that causes illiquidity (and to appraise the impact of these measures on the process of competition, not on the symptom of liquidity).

¹³ Ofgem (12 June 2013), *Wholesale power market liquidity: final proposals for a 'Secure and Promote' licence condition - Draft Impact Assessment*, p11.

Currently, the lack of equal access to long/medium-term hedging products tips the playing field against competitors to ESB (both existing and potential). Responses referred to in the Consultation indicate a shortage of these hedging products, with ESB retaining its dominant position in part because it has better access to the hedging opportunities offered by its large portfolio of generation. ESB's better access to hedging helps to entrench its dominant position in retail electricity markets.

Promoting competition in the I-SEM therefore requires that all suppliers have equal access to hedging contracts (or an equal opportunity to gain access to such contracts), by arranging a transfer of hedging products from ESB to other suppliers. This aim can be pursued regardless of its implications for measures of liquidity (volume of trade, frequency of trade, depth of market, etc).

The SEM-C sets out the objectives of the consultation at the start of section 2.2 of the Consultation, based on the following description of its findings:

“Responses to that discussion paper generally acknowledged the problem of lack of liquidity in the SEM and a belief that this is likely to continue into I-SEM. Respondents were also agreed on the importance of liquidity in promoting efficient price discovery and trading and allowing parties to hedge exposure to potentially volatile DAM prices in long-term trading; both generation and supply are ultimately long-term businesses with long-term contracts for capacity and fuel as well as for services to customers common in the market; the need for liquidity to flexibly cover these long-term risks is therefore evident for a competitive market and so any expected lack of liquidity may be investigated as a potential market failure warranting intervention.”¹⁴

We do not dispute the desirability of liquidity (however it is defined) for facilitating competition and are not therefore surprised that respondents identified a lack of liquidity as important, but we noted above that liquidity cannot be injected into an uncompetitive market. We note that “the need for liquidity to flexibly cover [...] long-term risks is therefore evident for a competitive market”, but would ask what exactly is meant by the desire “to flexibly cover...long-term risks”.

Most importantly, as discussed above, an “expected lack of liquidity” is not “a potential market failure warranting intervention”. Market failures lie deeper within a market and cannot be cured by cosmetic attempts to boost measures of relative liquidity.

Instead of focusing on rather nebulous concepts of liquidity, it would be preferable to consider the stated needs of market participants, namely:

- (1) “allowing parties to hedge exposure to potentially volatile DAM prices in long-term trading”; and
- (2) the ability “to flexibly cover these long-term risks”.

¹⁴ SEM-16-030, p8.

In this context, the “long-term trading” in (1) refers to market participants’ need to acquire contracts for future deliveries (up to about two years ahead). To meet this need, independent generators and suppliers require a one-time transfer of title (which we will term “access to contracts”), rather than frequent purchases and sales (which the SEM-C regards as a feature of “liquidity”).

The short-term flexibility in (2) refers to the need to adjust contract portfolios, so that each trader’s net contract position stays in line with its net physical position. That may require a “re-shaping” of the portfolio (changing the balancing of baseload and peak contracts) or adjusting the portfolio to changes in circumstances (trading short term contracts). (The description in the Consultation is not detailed enough to decide the relative importance of these needs.) In the I-SEM, given the general shortage of hedging contracts and continued reliance on fuel proxies, traders may never have enough hedging contracts to match their net physical position. In these conditions, few traders will ever have an *unexpected* surplus of short-term contracts that they wish to sell. Rather, in all conditions, they will be trying to buy additional contracts to cover their deficit, particularly at peak times. Measures intended to facilitate the “fine-tuning” of a net contract position may therefore serve no useful purpose and may harm competition if they expose traders to unnecessary risks.

However, firms with a non-diversified portfolio of generation and/or a large number of retail customers may well be looking for ways to break down baseload contracts into different time periods and to sell in those specific (eg. off-peak) periods where they have a surplus. Thus, respondents may be expressing a demand for the ability to buy and sell short-term shaped products, alongside their persistent demand for increased access to long-term contracts.

Thus, the shortage of hedging products in the I-SEM and their concentration within the hands of the dominant firm, ESB, hinders the ability of independent suppliers to compete with ESB in electricity retail markets. Any remedy should aim at spreading access to hedging products, so that each supplier can compete on an equal basis. The SEM-C should also consider whether respondents’ demand for “flexibility” would best be met by encouraging short-term *trading* or by offering better *access* to shaped products. Improvements in access may require an expansion of initial contract sales by certain parties. However, improving access need not require any great increase in “liquidity”, as measured by the level or frequency of forward market trading.

2.5. Implications for the Design of Remedies

2.5.1. Improving *measures* of liquidity does not necessarily improve *liquidity*

There is a wealth of literature discussing the concept of liquidity in markets for energy and other products, but they exhibit little consensus on policies intended to promote liquidity. Many articles recognise the same *essential property* of a liquid market – the ability to trade desired quantities without moving the price.¹⁵ Some articles focus on *measures* of liquidity, such as the frequency or volume of trades, or measures of market “depth” or “breadth”.¹⁶

¹⁵ See, for example: Ofgem (2011), *Ofgem’s Retail Market Review*, p11; CMA (24 June 2016), *Energy Market Investigation: Final Report – Appendix 7.1*, paras 7-8.

¹⁶ See, for example: Michael J Fleming (2001), *Measuring Treasury Market Liquidity*, pp5-7.

However, these articles do not suggest that taking steps merely to increase a *measure* of liquidity will achieve the *essential property* of liquidity. Indeed, reviews of such measures often find them to be ineffective (ie. they do not boost liquidity above what it would have been).

For example, Ofgem introduced a Secure & Promote (S&P) licence condition in 2014 “to ensure that the wholesale electricity market supports effective competition”. It introduced fair trading rules for small suppliers and a market-making obligation.¹⁷ However, it does not seem to have had much, if any, impact on competition.

The electricity market in Great Britain differs from the I-SEM, in that there is no single dominant firm. Ofgem’s introduction of the S&P licence condition was prompted by concern that the six vertically integrated generation-and-supply companies might trade with each other, but not with smaller, independent generators and suppliers. In its recent review of the British energy market, however, the Competition and Markets Authority (CMA) found that the S&P licence conditions had only improved the availability of products covered by the obligation, and did not bring clear improvements to other measures of liquidity. Indeed, improvements in liquidity in the specified windows may have come at the expense of liquidity outside the windows, so the S&P licence condition shifted or concentrated liquidity, but did not increase it overall. In any event, the licence changes had been insufficient to attract financial players into the market.¹⁸ Hence, even if some trades are attributed to the S&P licence condition, those trades might have happened in a similar form anyway, so there is no evidence the S&P licence condition prompted an increased volume of trade. The CMA did not therefore identify any benefit for competition attributable to the S&P licence condition.

This experience shows that it is potentially misleading to focus on particular measures of liquidity. Raising the level of liquidity measured in one way may not indicate any actual increase in liquidity as a whole. In fact, it may not indicate any improvement in market conditions.

2.5.2. Forward market illiquidity in the I-SEM stems from market structure

The illiquidity in the Irish electricity market is a result of the market structure. The market is dominated by a large company, ESB, that is vertically integrated (albeit with a regulatory ring-fence between its generation and supply businesses). ESB has two advantages which give it a competitive advantage over others:

1. First, as a vertically integrated company, ESB has less incentive to participate in the forwards market because the risk that its supply arm faces (ie. that the cost of purchasing at spot electricity prices rises, whilst its revenues are fixed) is largely hedged by the risk that its generation arm faces (ie. that its revenue at spot electricity prices falls, whilst a large share of its costs are fixed).

¹⁷ Ofgem (2013), Wholesale power market liquidity: final proposals for a “Secure and promote” licence condition, pp1 & 12.

¹⁸ CMA (24 June 2016), *Energy Market Investigation: Final Report – Appendix 7.1*, paras 89-93.

- The CMA notes that the “Big 6” companies in Britain are also vertically integrated, but that they still trade in the forward markets, because each company’s generating shape is unlikely to match the shape of its demand (eg. EDF primarily operates baseload plants, whilst Centrica primarily operates peaking plants).¹⁹
 - In contrast, ESB has a diverse portfolio of generators and is more able to match the shape of demand, meaning it has little incentive to hedge in the forward market.²⁰
2. Second, ESB has market power in the generation industry, and as a result has an informational advantage over other potential traders (a case of “informational asymmetry” which is not addressed by REMIT).

These advantages entrench ESB’s dominant position, for the reasons set out below. They define the market failure that merits intervention by the regulatory authorities.

Asymmetric information undermines the basis for a liquid market because such asymmetries create a problem of adverse selection. If a trader has private information that, once released, will cause prices to rise/fall, that trader will immediately want to trade contracts at the current prices. When the information becomes public knowledge and prices adjust accordingly, the counterparties to those trades will discover that they sold/bought at prices that were too low/high for current market conditions. They lose money as a result, and the trader with the private information makes a profit (which can be realised by reversing the trade at the new price level).

In the context of electricity markets, standard rules on insider trading such as those imposed by REMIT may prevent generators or suppliers from profiting unduly from private information about the underlying conditions of supply and demand (for instance, outages at a major generator or consumer).²¹ However, the provisions of REMIT are not sufficient to remove concern over asymmetric information in an uncompetitive market structure as found in the I-SEM. Liquid trading will not emerge in markets where there are dominant firms, or even where the dominant firms are constrained by regulation.

1. In an uncompetitive market, the dominant firms have private information about how they will affect market prices in the future.
2. In the market subject to regulation to mitigate the market power, the dominant firms still have private information, since they know more than others about their *relationship with the regulator* and hence how they affect prices in the future.

¹⁹ CMA (24 June 2016), *Energy Market Investigation: Final Report – Appendix 7.1*, para 105.

²⁰ The diverse nature of ESB’s generation is indicated by the selection of the shape for the DC portfolio, which comprises baseload/mid-merit/peaking contracts in the proportion 2/1/1. (SEM-16-030, p50) Other generators in the I-SEM possess generation that only operates in part of the merit order. ESB also possesses generators using a wider range of fuels, by merit of the fact that some generators only own one plant and therefore use only one fuel (or possibly gas and distillate).

²¹ REMIT effectively prohibits generators from trading until they have announced such outages.

The information asymmetry arising from uncompetitive market structures is therefore hard to dispel. Importantly for the I-SEM, regulatory measures to mitigate the market power of a dominant player would not restore confidence among financial traders, even if they were more restrictive than currently proposed. As proposed, however, the market power mitigation measures are less restrictive in the I-SEM than they currently are in the SEM.²²

Financial traders would not be privy to the discussions between regulator and regulated firm that determine future price controls, nor to the decisions of the regulated firm about how it chooses to comply with those price controls, placing them at a systematic disadvantage and discouraging their participation in forward markets.²³ Without the participation of financial traders to take on speculative positions, truly liquid markets cannot emerge.

Because of the acknowledged presence of market power in the physical markets of the I-SEM, traders in the I-SEM will never be prepared to take on large speculative contract positions and forward markets for electricity contracts will never be liquid in the I-SEM. The presence of market power mitigation measures changes the nature of the information asymmetry facing potential speculators, but does not eliminate it.

ESB's dominant position in physical electricity markets therefore hampers any expansion in the supply of forward contracts for hedging purposes. As a result, other generators and retailers less able to compete in their respective markets, which further entrenches ESB's dominant position. ESB's dominant position therefore provides the reason for regulatory intervention in forward markets.

2.5.3. The absence of entry does not indicate a competitive market

The observations above invalidate the SEM-C's discussion of market power in forward markets, which dismisses the possibility on the basis of unnamed "other generators" being able to respond to any over-pricing of (or a shortage of) forward contracts by expanding the supply themselves, ie. by acting as speculators. The SEM-C summarises its analysis of market power problems in the forward market in its Decision Paper on Market Power Mitigation as follows:

"The case for market power [in the forward market] is not clear; for example, concern has been expressed about the sell price of forward contracts and that it incorporates a significant premium. If the sell prices on offer are so obviously over-priced compared

²² "The market monitoring and enforcement function within the RAs will be a very important part of the I-SEM. The importance of this function is likely heightened given the less regulated nature of intervention in the DAM and also by virtue of the fact that there is likely to be less transparency to the wider market in I-SEM. For example, all bids and offers in the current SEM are published within a number of days to the wider market. It is likely that only anonymised aggregate bid curves for the ex-ante markets in I-SEM but greater clarity will be forthcoming on this in the coming months." MPM Decision Paper (SEM-16-024), p62.

²³ This effect was clearly observable in 1994, when Offer, the British electricity sector regulator, imposed complex price constraints on National Power and Powergen. The market in forward contracts (EFAs) had been growing only slowly up until then, but Offer's intervention caused financial traders to cut back their trading or to exit the market and set back development of the forward market for several years. See Competition Commission (2001), *AES and British Energy: A report on references made under section 12 of the Electricity Act 1989*, paras 7.154-156, for a record of submissions on this topic.

to the general view of forward prices this should provide a signal to other generators to offers at or slightly below this “high” price. This in general hasn’t happened which would appear that the sell prices are not so high that other generators would offer the same terms and have their supply arm purchase on the spot market. This of itself would appear to suggest that other generators don’t see the risk premium as being high enough to warrant offering forward contracts. The SEM Committee accepts that this may be an over simplification of the issue however.”²⁴

This view is indeed an “over simplification” of the situation under I-SEM. It is predicated on the (somewhat naïve) assumption that prices in the forward market must be competitive because no-one has entered the market with lower priced offers. Such argument would only be valid if it can be demonstrated that there are no barriers to entry. However, the SEM-C has not studied that question and in fact the supply of forward contracts is limited by barriers to entry, as indicated above by the discussion of competition, regulation and asymmetric information. The SEM-C’s conclusions are therefore unjustified.

2.6. Alternative Explanations of Respondents’ Views

As we understand the concerns of market participants, competitors to ESB are suffering from a shortage of hedging opportunities. The market is short in total, because some generators (particularly wind farms) are remunerated by regulated tariffs, are not exposed to electricity market prices, and therefore have no incentive to hedge market price risk.²⁵ The overall shortage of hedging products puts ESB (and indeed any company with a surplus to sell) in a pivotal position in the supply of hedging products. These companies can afford to raise the price of forward contracts and to withhold supply, exacerbating the shortage of hedging products. Contrary to the suggestion in the MPM Decision Paper, existing and potential competitors will not undercut these prices by supplying additional forward contracts. That would require them to increase their own net deficit (or to sell contracts over and above their need to hedge their own forecast generation). ESB’s dominance of physical markets would expose the resulting speculative positions to risk over its future use of market power and compliance with regulatory measures, ie. to asymmetric information.

Thus, the lack of entry by competing suppliers of forward contracts does not indicate that prices must still be too low to cover all the associated costs, but may be (and probably is) rather a product of ESB’s dominance over physical markets. The associated risks for potential speculators, including “other generators”, represent a barrier to entry (which the SEM-C has not investigated).

²⁴ SEM-16-030, p9.

²⁵ The Consultation Paper also says on page 14 that the correlation between gas and electricity prices “does not eliminate the need for electricity price hedging but it reduces the need for it” in relation to gas-fired generators. This argument does not rule out a desire by generators to hedge gas-fired generation and in any case it is unconvincing, for the same reason that fuel proxies offer an inferior form of hedging, namely the incomplete correlation between gas and electricity prices. The same applies to the (even weaker) statements about coal-fired generators at the same point in the Consultation Paper.

2.6.1. The lack of support for a risk premium in forward markets

The SEM-C's "simplified" analysis mentions a risk premium as a possible cost to explain why ESB can persistently set forward contract prices above average spot prices without encouraging entry by other providers of forward contracts. However, academic literature provides no basis for assuming that a risk premium exists in any forward market, let alone in the SEM or I-SEM.

First, most of the academic studies of forward markets (and of electricity forward markets in particular) measure the risk premium as the gap between contract prices and a manufactured estimate of "expected" prices.²⁶ Any gap they find must be viewed with caution, as it may be due to errors in estimating "expected" prices from observations of average spot prices. It would be arbitrary to attribute all such gaps to a "risk premium".

A risk premium derives from the (unobservable) preference of a person or company²⁷ for a deal with stable profits over a deal with variable profits, even if both deals offer the same expected profit. Forward contracts form part of a policy for stabilising profits and should not therefore require such a premium. However, even in a "risk neutral" environment, the price of a forward contract must cover all the expected costs of issuing it, including:

1. the high, but unlikely cost of a system stress event (see Box 2.1);
2. the expected cost of mis-scheduling (ie. cases where an in-merit generator is not scheduled to run during periods of high spot prices); and
3. the costs of collateral and credit control associated with the contract itself.

Box 2.1

Confusion between Observed Average Price, Expected Price and Risk Premium

Table 2.1 shows a simple example of a contract period (eg. a single month or quarter) divided between off-peak hours (90 per cent of the time) and peak hours (10 per cent of the time). In normal conditions, which apply 99 per cent of the time, the market price is €50/MWh in all hours. In the 1 per cent of hours when the system is under stress, the market price rises to €100/MWh off-peak and €5,000/MWh at peak times. Actual conditions observed over several years may never include a period of system stress; the observed average price in this type of period would then be €50/MWh. However, locking forward and taking account of the 1 per cent probability of system stress, the true expected price for this type of period would be €55.40/MWh. Thus, the observed average price of €50.00 would understate the

²⁶ See, for example:

Energy Link (August 2014), *Futures Prices and their Relationship to Modelled Spot Price*

Cartea and Villaplana (16 December 2007), *Spot price modelling and the valuation of electricity forward contracts: The role of demand and capacity*, p25

²⁷ Much controversy surrounds the suggestion that companies can hold risk-averse preferences, because of the opportunities for investors to diversify their investments. According to the CAPM theory, for instance, risks that are inversely correlated with the stock market are *attractive* to investors and have a low cost of capital. Thus, when companies show a preference for stable profits over variable profits, this preference may be attributed to the high cost of the capital required to manage variable cash flows, rather than to any anthropomorphic concept of risk aversion.

true expected price by 11 per cent. In a risk-neutral, well-informed and competitive forward market, contract prices would equal the true expected price of €55.40. It would be wrong to define the gap between contract prices and observed average prices as a “risk premium”, since contract prices equal *expected* future prices.

Table 2.1
Expected and Observed Prices (€/MWh)

		Off-peak	Peak	Average
Frequency:		90%	10%	100%
Probability	1%	€ 100.00	€ 5,000.00	
	99%	€ 50.00	€ 50.00	€ 50.00
Exp (P)		€ 50.50	€ 99.50	€ 55.40
"Premium"				11%

These expected costs may explain why contract prices lie above observed average spot prices, but they can in principle be described and estimated on the basis of objective evidence (more readily than a risk premium).

Second, academic studies of forward markets (and of electricity forward markets in particular) find evidence of positive, zero and negative risk premiums, giving no reason to suppose that a positive risk premium is the natural order in the I-SEM.²⁸

Economic theory does not support the case for risk premiums in electricity forward markets. Selling ESB's surplus generation in forward contracts *reduces* ESB's exposure to electricity spot price risk and would require no risk premium;²⁹ a supplier with fixed revenues who buys a forward contract is also reducing its exposure to electricity spot price risk.

Suggesting that either party to an electricity forward contract should command a substantial risk premium indicates a misunderstanding of hedging, since hedging trades reduce risk for

²⁸ For example, in analysis of the PJM market in the United States, Longstaff and Wang (2004) “find that electricity forward prices tend to be lower than expected spot prices *on average*, [...] but that] *median* forward prices are actually higher than median spot prices for all but a few of the early morning hours.”

Source: Longstaff and Wang (2004), *Electricity Forward Prices: A High-Frequency Empirical Analysis*, pp1-2. *Emphasis added.*

²⁹ This analysis follows the discussion of incentives to hedge on page 50 of the Consultation Paper, taking into account the criticism of “dirty” (cross-fuel) hedging set out in section 2.3. It assumes that ESB, like generators in Great Britain, would benefit from fixing its margin by signing forward contracts for the purchase of gas and the sale of electricity. If ESB is following some other strategy, it would be important to understand why and also to analyse whether ESB (as a dominant firm and state-owned entity) is following a rational commercial strategy for a privately owned generator operating in a competitive market.

both generator and supplier.³⁰ Thus, there is no basis for assuming that risk premiums account for the difference between (a) (unregulated) forward contract prices and (b) the estimates of expected future prices used in Directed Contracts. Some other explanation must be provided for the higher prices in unregulated forward contracts, using evidence on expected costs.

In summary, the SEM-C has indeed “over-simplified” the situation in forward markets, by ignoring barriers to entry and by misunderstanding the risk implications of hedging contracts. Because of the barriers to entry, there is good reason to believe that the effects of ESB’s market power extend into forward markets. Measures to remedy this problem would focus on encouraging ESB to increase the supply of long-term forward contracts and would therefore be quite different from (inevitably fruitless) attempts to promote abstract notions of liquidity.

“Other generators” cannot make good the shortfall in ESB’s supply by offering more contracts than they need to hedge their own output. Such trading would draw them into an unnecessarily speculative contract position, which they cannot take on (for a variety of commercial and regulatory reasons). Whilst “other generators” can perhaps offer some contracts, particularly if they have a surplus of generation, their ability to compete would be damaged by obligations to sell contracts beyond their need for hedging.

2.7. The Removal of the Regulatory Ring-Fence Is Not Necessary

Of the five policy changes proposed by the SEM-C, three involve the removal of the regulatory ring-fence around ESB and EI. As we discuss with respect to those specific policy suggestions in chapters 3 and 4, the removal of the ring-fence is not necessary to achieving the goals of the SEM-C’s intervention. In fact, it may reinforce ESB’s position as the dominant market power through a decrease in competition and an increase in ESB’s informational advantage.

It is possible that the SEM-C is offering to remove the ring-fence as a concession to ESB in exchange for the imposition of the proposed interventions. However, as we discuss in the subsequent chapters, the proposed interventions will actually hurt other parties more than they hurt ESB, resulting in an improvement to ESB’s position relative to the industry. As such, the removal of the ring-fence would only make the disparity worse.

In a 2010 report for the regulatory authorities, economic consultants CEPA concluded that the removal of the ring-fence would reduce ESB’s incentives to trade on forward markets:

³⁰ A risk premium is the price charged by a risk-averse party for taking on additional risk. It arises when one party “transfers” a risk to another party. However, in electricity markets, a forward contract between a generator and a supplier reduces the risk facing *both* parties, because both parties benefit from reduced exposure to the spot price. This form of hedging is known as “sharing” a risk. Since both parties benefit by sharing a risk, neither has a strong reason to exact a fee or risk premium for signing the contract. Differences in the degree of risk aversion between generators and suppliers might conceivably lead to a small premium being charged, but it would be charged by whichever side is less risk averse than the other (at the margin), and would reflect only the *difference* between two counterparties’ risk aversion, so it could be either positive or negative, and small.

“ESB’s generation capacity would provide an automatic and costless hedge for its retail activity, reducing or eliminating its need to trade contracts with other market participants unless this were mandated.

Vertical integration would, absent undertakings, give ESB the power to deny other suppliers forward market wholesale market access unless prevented [...]

Even if vertical integration were approved, together with certain liquidity requirements (on ESB and potentially other generators), this would not address the underlying lack of incentive on ESB to engage actively with market participants to offer liquidity of the right shape etc and increase reliance on the regulators to monitor, approve and track the type of contracts made available is what potential entrants need. It would also give potential entrants subsequent pause to consider whether, after they entered, they might be subject to various forms of hard-to-monitor discrimination [...]

An integrated ESB would have less of an incentive to facilitate trading (as this could potentially aid new entrants by reducing entry barriers).³¹

CEPA further found that consumers would benefit from the continued existence of the ring-fence:

“Our analysis has shown that, in the presence of the SEM pool system, retail suppliers do have a degree of ability to offer at least monthly fixed price contracts to its consumers, but that it would remain a challenge for the retail supplier to offer longer term fixed price contracts. This, combined, with the key lesson from BETTA that contract liquidity in electricity is problematic both to investigate, and to design remedies for, would argue for a continuation of ring-fencing for a further period.”³²

In the 2012 decision document drawing on CEPA’s report, the SEM-C accepted CEPA’s recommendations but noted that “[t]he SEM Committee would, however, separately consider any proposals for ESB vertical integration in the context of a material change to market power in the SEM. An example of a material change would be a significant reduction in ESB’s generation plant portfolio”.³³

There has not been “a material change to market power in the SEM” since the 2012 decision. If the ring-fence was good for the market and consumers in 2012, then it remains good for the market and consumers today. Any proposal to remove the ring-fence would have to demonstrate either that changes in market conditions since 2012 had invalidated the original case for ring-fencing (under the criteria set out in that decision document), or that removing the ring-fence was necessary to achieve certain benefits that were not considered in 2012.

³¹ CEPA (2010), *Market Power and Liquidity in SEM - A report for the CER and the Utility Regulator*, 15 December 2010, p85.

³² CEPA (2010), *Market Power and Liquidity in SEM - A report for the CER and the Utility Regulator*, 15 December 2010, p71.

³³ SEM Committee (1 February 2012), *SEM Market Power & Liquidity – A SEM Committee Decision Paper – SEM-12-002*, p4.

The Consultation provides no such justification for removing the ring-fencing of ESB-Generation and EI.

2.8. Initial Assessment of the Options

The title of chapter 10 of the Consultation is “Initial Assessment of Options”. However, even for an “initial” assessment, it is cursory, inconsistent and highly subjective. Links to the appraisal criteria are implied rather than stated, but in any case the cursory appraisal offered on pages 84-85 suffers from a number of weaknesses.

Effective: The SEM-C states that Option 1 “scores poorly on effectiveness”, but then describes the “focus” of the other options without assessing how effective they are in achieving any stated objective.

Targeted: The Consultation dismisses Option 1 for not targeting “those best able to provide forward hedges”, but favours Options 2 to 5 for a different reason, ie. because they “place obligations proportionately on those best able to discharge them”. The latter reason seems to be a matter of practicality, rather than targeting. Neither reason considers whether the targeting is best designed to achieve defined benefits. Any proper consideration of targeting would consider (1) legal requirements, such as whether not the targeting of obligations is proportionate or discriminatory, and (2) economic objectives, such as whether or not the targeting of obligations will further the objectives of efficiency, competition and consumers’ interests (or the other statutory duties of the SEM-C).

Practicality: The Consultation provides no evidence for the assertion that Options 1 and 2 require fewer resources than Options 3 to 5. Given the additional roles and institutions created under Option 1, in particular, there can be no presumption that it uses few resources. Similarly, there is no basis for asserting that the removal of ESB’s ring-fencing in Options 3-5 “introduces new market monitoring mechanisms”. These Options might require new mechanisms to be introduced, to replicate the beneficial effects of ring-fencing, but the Consultation does not describe any such mechanisms or consider their costs.

Transparent: The paragraph on page 85 provides a confused assessment of Option 1, claiming it maintains current trading arrangements, whereas it explicitly changes them. It is also unclear as to whether or not the current trading arrangements are sub-optimal by the transparency criterion, since it adds that “DCs is [sic] very transparent”. The appraisal of Options 2 to 5 confuses the transparency (ie. objectivity and predictability) of the regulations with the transparency (ie. the public nature) of the trading arrangements, without indicating which is relevant to the appraisal criterion.

This initial assessment therefore shows a cavalier attitude towards both the definition of the assessment criteria and to the evidence required to apply them. Any final decision would have to apply consistent definitions of these criteria to every aspect of the Options being considered.

2.9. Conclusions

Our first observation is that “liquidity” is a poor guide to action in forward markets, (1) since improvements in liquidity are not well-defined and (2) because liquidity is merely a symptom

of favourable market conditions and cannot be manufactured if the underlying conditions are unfavourable. The continued presence of a dominant firm with market power – and the resulting measures to mitigate market power – creates an information asymmetry within the I-SEM that makes a truly liquid forward market unachievable.

The main consequence of this observation is that the appraisal criteria used in chapter 10 of the Consultation should be formulated in the same way as they have been throughout the I-SEM process, and should not be reformulated in terms of liquidity. Liquidity is a poorly defined and ultimately elusive aim, which provides a poor basis for appraisal. The criterion “effective” would be highly subjective if it were tied to the need to be “effective in facilitating development of liquidity”. Similarly, the criterion “targeted” provides no guide if schemes must be “aimed at those best in a position to facilitate greater liquidity”. Instead, these criteria should be restated using the same standards as in other workstreams, namely legal requirements, economic objectives such as efficiency, competition, consumer interests, and other statutory duties of the SEM-C.

Our second observation is that, although the F&L Workstream cannot hope to promote a liquid market, it can help traders compete more effectively by helping to provide a level playing field for hedging. The SEM-C’s dismissal of market power in the forward market was indeed “over-simplistic”, being based on a misunderstanding of effect of hedging, the costs of adopting a speculative contract position, and the consequent barriers to entry into forward markets (see section 2.3 above).

A valid aim for the F&L Workstream would therefore be to make ESB Generation (and perhaps other firms with surplus generation) sell forward contracts covering a reasonable proportion of its generation, so that third parties can acquire a contractual position that hedges a reasonable share of their market risks, comparable with the hedging available to EI. This requirement seems to represent the core of the concerns raised by market participants (see section 2.5.3). In this Consultation, such requirements are addressed through the FCSO, but the change in focus suggests a different targeting of the obligation, as we explain in chapter 3.

A second aim for the F&L Workstream might be to help market participants “readily [...] trade out of positions” as forecast market conditions change. However, market participants appear to have expressed less concern about this aspect of “liquidity” than about their initial ability to acquire a contract position.³⁴ That would not be surprising. As long as the market is short overall of hedging products, most participants will also remain short of hedging products. They will have little or no reason to offer contracts for sale in short term markets, just because they forecast a rise in their generation or a fall in their retail sales. Suppliers and undiversified generators may consider selling contracts for certain time periods to achieve contract portfolios with a particular “shape”, but this desire would merely be an extension of the desire to acquire long-term contracts for hedging purposes. In these conditions, the Market Maker Obligation (MMO) offers little hope of creating liquid trading, and may

³⁴ According to the Consultation Paper, “Respondents were also agreed on the importance of liquidity in promoting efficient price discovery and trading and allowing parties to hedge exposure to potentially volatile DAM prices in long-term trading”. However, “the need for liquidity to flexibly cover these long-term risks” is merely “evident for a competitive market”. (SEM-16-030), p8.

prejudice the ability of some market participants to hedge their risks, as we discuss in chapter 4 below. Some reconsideration of the MMO in the light of these observations is therefore a priority.

Finally, measures to promote liquidity are not costless and are not guaranteed to produce a zero or positive net benefit. Many of the interventions proposed in the FML Consultation would impose additional costs and risks on the affected companies. Often, this burden would be felt more heavily by non-dominant companies with a smaller and less diversified portfolio of generation than the dominant player, a side-effect that is harmful to competition. To justify each intervention, therefore, the SEM-C would need to provide objective evidence not only that each measure is “aimed” at a problem, but also that each measure has some chance of producing a well-defined and beneficial outcome.

We discuss the FCSO and MMO options in more detail in chapters 3 and 4 respectively. Chapter 5 discusses the hybrid options.

3. The Forward Contract Sell Obligation

3.1. The Aim of the FCSO

3.1.1. Stated objectives

The Consultation set out the objectives of the FCSO in terms of a desire to promote liquidity in the market for forward contracts: “Option 2 is considered because it ensures minimum levels of forward contracts are made available for sale (albeit at a minimum price). It thus addresses the liquidity issue administratively”.³⁵ In this context, the “forward contracts” covered by the FCSO relate to monthly auctions of annual contracts.³⁶

3.1.2. Problems with the stated objectives

As discussed above, auctioning off annual contracts will not promote liquidity, ie. frequent trading, an objective that is not best supported by direct regulatory interventions. However, the auctions do provide the opportunity for independent suppliers to gain access to hedging contracts. On the other hand, a valid purpose for such auctions is to give independent suppliers access to hedging contracts on a level playing field with the dominant firm, ESB, which has a surplus of generation.

The proposed FCSO will only create a one-off sale of 0.7 MWh of contract per MWh of dispatchable generation. That sale will not by itself greatly improve liquidity or price discovery, as claimed in the Consultation.³⁷ In principle, obliging the dominant firm to sell forward contracts to a number of other companies would tend to help to create a market in shorter term contracts (for periods shorter than a year) as those companies fine-tune their net contract positions to match changes in their physical positions. (Experience in other countries suggests that market will emerge without the need for any Market Maker Obligation - see below.) In practice, suppliers are unlikely to fine-tune their net contract positions unless the dominant firm sells forward contracts in sufficient volume to enable suppliers to cover their risks; The proposed FCSO obligates generators to sell only 50 per cent of end-users' consumption. Therefore, the design of the FCSO proposed in the Consultation is *inadequate* because it does not impose a sufficient obligation on the dominant firm. Moreover, the proposed FCSO is *disproportionate* because it requires other market participants to make forward contracts available, which is unnecessary for promoting liquidity.

³⁵ SEM-16-030, p71.

³⁶ SEM-16-030, Table 7 on page 50: column (2) shows 12 auctions per year; column (3) shows 12 months of product delivered per auction.

³⁷ See for example, SEM-16-030, p52. “In addition, Market Participants which now have an internal hedge would be required to externally trade some of that internal hedge. The advantage of this approach is that it makes the price formation in the forward market more robust.”

3.1.3. Inadequate volume for the dominant firm

According to the Consultation, the current proposal for the FCSO will fail to achieve the objective of creating level playing field in access to annual contracts. It will fail because apparently it will not oblige the dominant firm to sell a larger volume of contracts than it would otherwise, for the following reasons.

The Consultation itself argues that the FCSO will not improve access to contracts *in total*, but will extend selling obligations over a *wider* range of companies.

“The FCSO on its own will not increase substantially the volumes which are currently traded in the forward market (see section 3.2 for volumes traded in 2015). However the FCSO will improve market liquidity to the extent that selling obligations would be spread across a larger number of market players.”³⁸

Some of the selling obligation will fall on companies with a deficit, who may be obliged to sell contracts that they would not otherwise sell. Given that the total is not expected to increase, that implies that the FCSO would allow ESB to *reduce* its sales of forward contracts. Such an obligation will not help to remedy the effects of ESB's market power in the forward market.

3.1.4. Harmful extension to companies with a negative physical position

Within the SEM, many supply businesses are perennially short of hedging contracts, because of the overall shortage. If they have an affiliated generation business, the perennial shortage of hedging may make them less willing to sell forward contracts than, say, similar businesses in Britain. However, that is not sufficient reason to oblige all generation businesses to sell forward contracts.

Where a company with both generation and supply businesses starts out with a deficit of hedging contracts (ie. retail sales bigger than its generation output), obliging it to sell forward contracts can only expand its deficit. Such an obligation would contribute nothing towards giving all suppliers equal access to hedging contracts. However, it would expose those companies to additional costs and risks that are harmful to competition. We discuss these problems further below.

Extending the FCSO to companies with a negative physical position is therefore unnecessary and harmful to consumers' interests.

3.1.5. Focusing the FCSO on a valid objective

When confronted with a dominant firm in the electricity market, regulators in several countries have recognised a need to transfer title over that firm's forecast generation to other players, via contracts for “Virtual Power Plants” (VPPs) and similar arrangements (for a

³⁸ SEM-16-030, p52.

current example, see France³⁹). Such policies help to limit the market power of the dominant firm and also to put all competitors on a level playing field.⁴⁰ Generally, such measures are not designed to promote an (arbitrarily chosen) measure of liquidity.⁴¹

Hence, the rationale for the FCSO therefore needs to be restated and its design reconsidered. The FCSO will not cause a liquid market to spring into operation just by forcing some sales. If any liquidity does emerge, it will come from transferring title over the dominant firm's (forecast) generation to a number of other market participants, who then start to trade their contracts. The FCSO might therefore be focused on the dominant firm, to remove its capability to restrict the supply of forward contracts.

To ensure that all suppliers have equal access to hedging, the SEM-C may wish to extend the FCSO to other companies, to ensure that they offer their generation into forward contract markets. In that case, the FCSO should not be imposed on companies with a net deficit (generation less than retail sales). Forcing such companies to sell forward contracts will widen their deficit, impose additional costs and risks, and make it even more unlikely that all suppliers will have equal access to hedging.

The FCSO should therefore be targeted at fewer companies than the current proposal, with the aim of promoting equal access to forward contracts for hedging purposes, not abstract concepts or narrow measures of liquidity.

³⁹ VPPs have been used in France for many years to overcome EDF's dominance. From 15 December 2005 to 13 January 2006, the Commission de Régulation de l'Énergie (CRE) ran a consultation on the "Virtual Power Plant" (VPP) contracts then being offered by EDF. Most of the questions concern the performance of the sector (development of competition, wholesale prices, investment in generation), rather than liquidity. One question asked if VPPs allowed players in the wholesale market "to find power which would not have been available on the markets without VPPs" – similar to the concept of access to hedging discussed here. Another question asked what VPPs did for liquidity; responses noted the contribution to "momentary liquidity" by sales of the VPPs, but were generally negative about the overall level of liquidity in the French market. CRE (2006), *Summary of replies to the public consultation on the Virtual Power Plants (VPP) system implemented by EDF*, Annexe 1, available at: <http://www.cre.fr/en/documents/deliberations/communication/virtual-power-plants-vpps-introduced-by-edf-and-their-development-towards-a-regulated-programme-for-release-of-electricity-on-the-wholesale-market/read-the-synthesis-of-public-consultation-answers>

⁴⁰ These policies assume that it is undesirable to allow a single company to return the commercial advantages of vertical integration that are denied to others, because that company is dominant. The situation in GB is different, in as much as there is competition between vertically integrated businesses (see the final report of 24 June 2016 by the Competition and Markets Authority on its Energy Market Investigation). Such competition provides a mechanism for passing the benefits of vertical integration on to customers, which is absent where one firm is both vertically integrated and dominant.

⁴¹ VPPs have been used in the Netherlands from time to time as a remedy in merger cases (eg. Nuon-Reliant, 2003), to constrain market power. (E. van Damme, *Liberalising the Dutch Electricity Market: 1998-2004*, CentER and TILEC, Tilburg University, 3 March 2005.) In 2005, the Dutch energy regulator considered obliging electricity companies to sell VPPs in order to promote liquidity, but eventually abandoned the idea. (Dienst uitvoering en toezicht Energie (Dte), *Informatie- en Consultatiedocument ten behoeve van het advies van DTe aan het Ministerie van Economische Zaken (EZ) inzake Virtual Power Plant veilingen voor de Nederlandse groothandelsmarkt*, Den Haag, June 2005.) In section 4.3, we discuss the market maker rules adopted in Britain, and the conclusion of the Competition and Markets Authority that they do not boost liquidity, in the context of the Market Maker Obligation.

3.2. Option 2: Basic FCSO

3.2.1. Key Elements of the Proposal

Under the current proposal, the FCSO would be imposed on “certain generation companies which are above a certain market share of dispatchable volumes”.⁴²

The Consultation defines the total volume of the obligation as supplier demand (32.9 TWh) multiplied by 50 per cent to account for the following deductions:

- Unhedged prompt deliveries (10 per cent);
- Proxy hedges from fuel derivatives (20 per cent);
- Contracts provided by Interconnector/GB (20 per cent).

The required volume of 16.45 TWh (before DCs and PSOs)⁴³ is allocated to generators in proportion to their forecast Market Scheduled Quantity (MSQ),⁴⁴ ie. a forecast of their presence as generators in the physical spot market.⁴⁵

The obligation to sell is defined as a standard contract portfolio of baseload/mid-merit/peaking contracts in the ratio 2/1/1 “that mirrors the decision relating to DC contract allocation in the current market.”⁴⁶

3.2.2. Problems with the allocation rule

The proposed scheme would assign the FCSO not only to ESB, but also to a number of other non-dominant companies. Table 3.1 below takes the data from Tables 1 and 2 on pages 15-16 of the Consultation and links up generation with supply to show the net position of each “group” (ie. the combined generation and supply business). The generation businesses above the dashed lines are the ones for which the SEM-C proposes an FCSO.

Where non-dominant companies have no supply business, they would already have to sell their market generation. In these cases (AES, Auginish, Tynagh, Bord na Mona), the FCSO would be justified if it encouraged them to sell forward contracts rather than spot contracts, and so increased the supply of hedging products to the supply businesses.

As currently defined, the allocation of the FCSO can (and does) impose additional costs and risks on companies with a deficit (ie. those whose own generation is already less than their

⁴² SEM-16-030, p71.

⁴³ SEM-16-030: See the calculation on p49, and the explanatory Table 8 on p51. Presentationally, it makes more sense to regard DCs and PSOs as two means by which ESB *fulfils* its obligation under the FCSO, as in Table 8, rather than as part of its obligation *per se*, as suggested on pages 48-49.

⁴⁴ SEM-16-030, Table 8 on p51.

⁴⁵ Figures cited are the MSQ set out in the Consultation, Table 8. It is not clear from the Consultation whether the calculation of ESB's MSQ includes its PSO generation. We have assumed that the PSO volumes are included in the MSQ on the basis that the SEM-C subsequently deducts the PSO volumes from the Gross FCSO to define the Net FSSO on ESB. If PSO volumes are not included, then they should not be subtracted from ESB's FCSO.

⁴⁶ SEM-16-030, p50.

sales to consumers). Forcing them to make additional contract sales will push them into a speculative net position with an even larger deficit. The consequences are potentially severe. For such companies, selling forward contracts can breach certain commercial constraints (such as their access to finance to cover their positions, and formal debt covenants). It will also breach regulatory constraints.

Most energy companies in Europe currently operate without having to meet the licensing and reporting requirements of financial market regulation, because they only use forward markets to dispose of their own production or to procure a supply for their retail sales. Such trades (which together comprise a hedging strategy) do not fall under financial regulation.

Table 3.1
MSQ Net Position by Group

Company	MSQ 2015		
	Generation (TWh)	Supply (TWh)	Net Position (TWh)
ESB	14.62	12.42	2.20
Bord Gais	2.59	2.63	-0.04
AES	1.68	0.00	1.68
Auginish	1.34	0.00	1.34
Tynagh	1.26	0.00	1.26
SSE	1.22	7.23	-6.01
Bord na Mona	0.81	0.00	0.81
PPB	0.31	0.00	0.31
-----	-----	-----	-----
Energia	0.17	7.49	-7.32
LCC/Go Power	0.00	1.08	-1.08
Budget Energy	0.00	0.22	-0.22
Vayu	0.00	0.39	-0.39
PrePayPower	0.00	0.39	-0.39
Firmus	0.00	0.02	-0.02
Others	0.19	1.05	-0.86
Total	24.19	32.91	-8.72

Source: SEM-16-030, Tables 1 and 2.

However, when applied to a company with a negative physical position, the FCSO forces trading that is not required for the disposal of own production, or for hedging, but rather a form of speculative sale in excess of own production. Such behaviour changes the nature of the risks borne by the company and is likely to incur the additional obligations associated with the regulation of financial traders.⁴⁷ There is no indication that energy companies

⁴⁷ We understand that there is not complete clarity over the application of MiFID I, REMIT and other EU financial regulations to companies trading electricity, but that the introduction of MiFID II in the next couple of years will tighten the restrictions considerably.

operating in the I-SEM will be equipped to take on such a role, without a major restructuring of their activities and without incurring significant costs.

In practice, that constraint only rules out SSE and Bord Gáis from the current proposal. However, it would be undesirable to hinder any company's ability to compete, or to discourage any companies from entering the market, by imposing unnecessary commercial and regulatory burdens on them.

3.2.3. Excessive deduction for fuel proxies and interconnectors

Within the calculation of the obligation volumes, the deduction of 20 per cent for proxy hedges using gas prices is unjustifiable or, at the very least, excessive.

- In the first place, it is well established that gas contracts are a poor substitute for electricity contracts as a means of hedging risk.
 - Footnote 2 of the Consultation dismisses observed deviations between gas and electricity prices in 2009 as a mere "detail". Such comments are naïve and overly complacent, since it is precisely these deviations that make fuel proxies unsuitable instruments for hedging electricity prices in the future. Gas and electricity prices are likely to diverge whenever there is a surplus of gas and/or a shortage of generation capacity. It is precisely on those occasions, when a proxy fails to track the desired price, that electricity market participants need protection from spot price risk. Close correlations at other times provide no compensation for exposure to these occasional risks. Experience has therefore shown that gas contracts represent a poor instrument for hedging electricity price risk.
 - The British energy regulator, Ofgem, has already dismissed the use of gas contracts as a suitable basis for hedging electricity price risk. When discussing how to hedge electricity price risk with gas contracts, Ofgem has written, "For physical players, this so-called 'dirty hedging' may not be sufficient. The future correlation between these commodities may change, especially given higher intermittency. The gas market also does not provide access to peak products. Smaller players may find this approach to managing their risks particularly unappealing, especially as a firm using gas to hedge a physical power position would still have to purchase power at some point".⁴⁸
- Second, even if suppliers currently rely on gas contracts for a proxy hedge to the extent suggested by this proposal, they have only resorted to that solution because of the shortage of electricity forward contracts. Since the aim of the FCSO is to overcome this shortage, it is perverse to entrench this current shortage into the remedy.

An effective design for the FCSO would therefore reduce the need for suppliers to rely on gas contracts, because they are such a poor substitute for electricity price hedges. Therefore, if the current figure of 20 per cent is derived from current practice, it is too high and should be

⁴⁸ Ofgem, *Wholesale power market liquidity: final proposals for a 'Secure and Promote' licence condition - Draft Impact Assessment*, 12 June 2013, p.11

reduced as far as possible. There is scope to increase the FCSO volume, given that the proposed FCSO only covers about two-thirds of generation MSQ for the companies concerned.⁴⁹

The calculation of the 20 per cent contribution from interconnectors (equivalent to 6.34 TWh)⁵⁰ also appears to be excessive, because it adjusts the capacity of the Moyle and EWIC interconnectors for loss factors, but makes no allowance for the load factors of imports into the I-SEM being less than 100 per cent (or for potential exports). However, there is an error in the calculation of the contribution of FTRs on page 25, which renders it non-transparent. The formula shown there does not give 6.34 TWh as stated, but rather 8.46 TWh:

$$8760 * (500*0.95+500*0.982) = 8.46 \text{ TWh}$$

The conversion from 8.46 TWh to 6.34 TWh (implying some factor of 75 per cent) is not explained in the Consultation. It may represent the adjustment for a load factor, since users of the interconnector are unlikely to provide hedges in excess of actual or forecast net flows, regardless of the maximum availability of FTRs. However, it is impossible to decipher the formula at present.

Correcting this error or oversight may not have any impact on the proposed FCSO itself. However, it indicates a lack of care in formulating and describing the proposal, and a cavalier attitude to providing reasons for decisions. We hope this deficiency can be remedied by the time of the final proposals.

There is no reason to treat interconnector capacity differently from generation capacity inside the I-SEM, whose contribution to supplier demand is measured by its actual output or market deliveries (MSQ). Some adjustment (or a more careful and detailed explanation) of the contribution from interconnectors is therefore required.

3.2.4. Untargeted (and possibly discriminatory) contract portfolio

The application of a common contract portfolio (2/1/1 baseload/mid-merit/peaking) to all generators further increases the risks created by the policy, since many generators do not generate output in that proportion. The obligation will therefore force them into unnecessary speculative contract positions, not covered by their forecast generation.

- For instance, a company with only mid-merit generation capacity will be forced to sell baseload and peaking contracts that are not covered by forecast output (even though its supply business needs to buy such contracts).

The Consultation explicitly links the design of the common contract portfolio to the DC process,⁵¹ which itself was designed to suit ESB's diversified portfolio of generation. Imposing the same portfolio on other generators with non-diversified portfolios of generation

⁴⁹ SEM-16-030, Table 8, p51.

⁵⁰ SEM-16-030, p25.

⁵¹ SEM-16-030, p50.

might be deemed discriminatory. (It applies equal treatment to parties operating in different conditions, without any objective justification.)

Given that the total volume of the obligation is derived from forecast data for MSQ, it ought to be possible to derive a company-specific contract portfolio for its obligation from the structure of the same data for MSQ. Such a company-specific contract structure would, in principle, impose less risk on each generator, in as much as its obligation to sell would more closely reflect its forecast generation.

However, the overall scheme remains dependent on subjective, and therefore non-transparent, estimates of future market deliveries, as discussed next.

3.2.5. Non-transparent basis for regulatory obligations

The total sales obligation imposed on each company is based on an estimate of each generator's future MSQ. Whether this future MSQ is represented by the output of an electricity sector model, or by data on actual MSQ from some arbitrarily chosen historical period, this part of the scheme remains highly subjective and unpredictable, so it lacks transparency.

Forecast (net) flows on interconnectors are also notoriously unpredictable. The calculation of the total FCSO seems to rely on such a forecast of net flows (although the calculation is not explained – see above). Reliance on such estimates injects another subjective or non-transparent element into the proposed design of the FCSO.

The outputs for non-diversified (ie. independent, mid-merit and/or peaking) generators will be particularly volatile and unpredictable. In contrast, the output of ESB Generation has a more stable level and pattern, due to its larger and more diversified fleet of generators. Setting the mandatory structure of a fixed contract portfolio on the basis of such forecasts will therefore expose other generators to greater commercial risk than ESB, which is harmful to competition and consumer interests. Such problems would be greatly reduced if the FCSO were imposed only on ESB and other generators whose market generation is stable and predictable.

3.2.6. Market power in the FCSO auction

The proposed FCSO design does not allow generators to exercise market power on the sell-side because they are required to offer their full obligations at the administered reserve price. However, the Consultation omits any detailed consideration of the exercise of market power by *bidders* in the auctions. In practice, EI may have the *ability* and *incentive* to exercise market power in the FCSO auction.

EI may be *able to affect prices* in the auction. In cases where EI is the price-setting bidder, an increase in EI's bid would directly translate into an increase in market prices. In cases where EI is not the price-setting bidder, increasing the price and volume of its bid may displace lower bids and increase the clearing price in the auction.

At least when bidding for volumes below ESB Generation's obligation in the auction, EI could have an *incentive* to bid higher prices than any other supplier. On the one hand, the price in a contract between ESB Generation and EI is merely a transfer price with no

implications for the profitability of the group as a whole. On the other hand, ESB would benefit from an increased price on its hedging products across its net sales to all other bidders through the FCSO. Moreover, by increasing the volume and price of its bids EI could obtain a larger share of the FCSO contracts, which would leave competitors with fewer and more expensive hedging products and soften competition in retail markets.

Box 3.1 below shows how EI could exercise its market power using a schematic of the auction process as presented by the SEM-C in a liquidity workshop.⁵²

Box 3.1
EI May Have the Ability and Incentive to Inflate Forward Contract Prices

Figure 3.1 shows the price-setting mechanism of the FCSO auction, without EI exercising market power. Bids are represented by the red steps and the price is set by the intersection of the red line and the vertical FCSO.

2 shows the consequences of EI bidding a larger volume. By doing so, it may push out some suppliers bidding a lower price, causing the clearing price of the auction to increase. EI would have to pay a higher price for the contracts it had secured, but this downside is mitigated by the higher price that ESB Generation would also *receive* for the generation it sells. EI would obtain a larger share of the FCSO contracts, leaving fewer competitors with access to hedging products and forcing higher prices on those that do manage to secure hedging products.

⁵² SEM Committee (6 July 2016), *Measures to Promote Liquidity in the I-SEM Forward Market – Open Forum*, slide 53.

Figure 3.1
FCSO Auction Process (as Proposed by SEM)

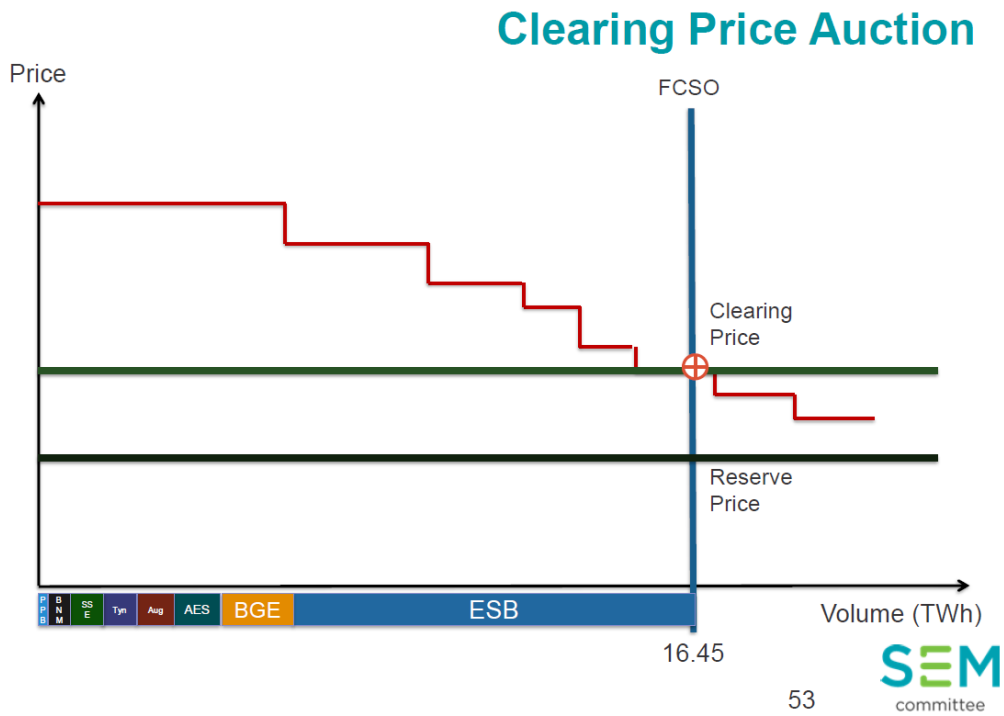
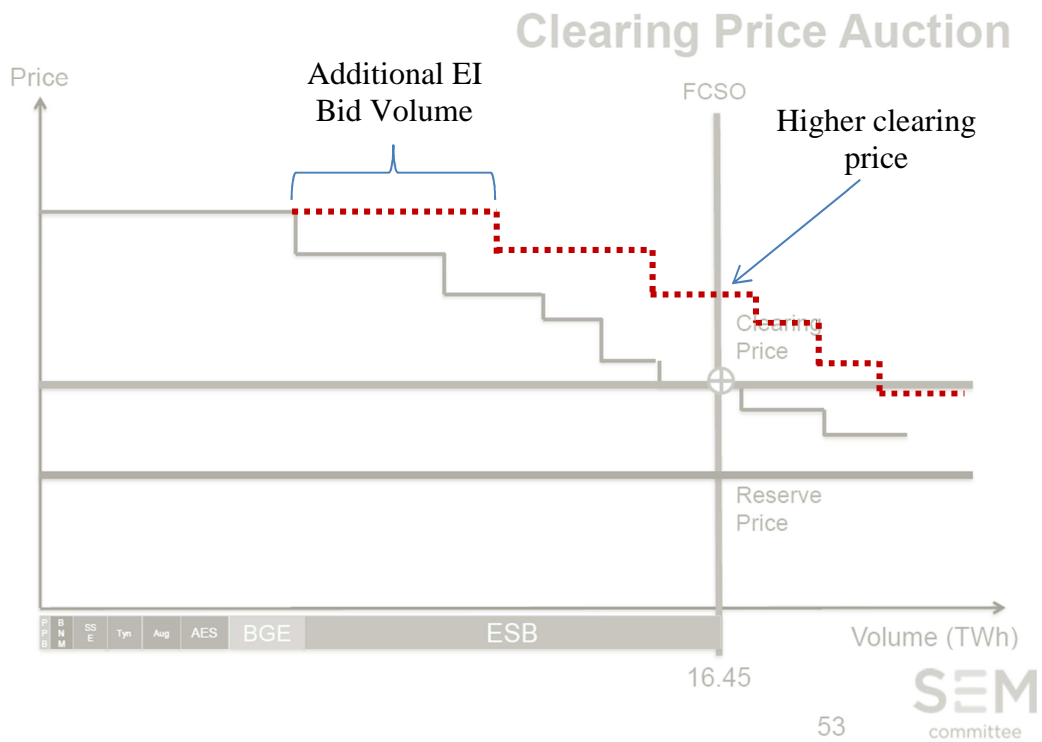


Figure 3.2
FCSO Auction Process (EI Exercises Market Power)



Source: SEM Committee

3.2.7. Conclusion on Option 2

The current proposal for option 2 applies a scatter-gun obligation in the (inevitably forlorn) hope of promoting some measure of “liquidity”. It imposes additional costs and risks on many non-dominant generators that will encourage premature exit or discourage entry, in a manner that may be discriminatory. This anticompetitive element of the design problem would be avoided by focusing the FCSO (like other remedies) on the source of the real problem, namely ESB’s dominance of forward markets. Any extension to other companies would be justified by the desire to give all suppliers equal access to hedging, rather than by abstract notions of liquidity.

If the FCSO is extended, it should not be imposed on companies with a negative physical position (generation less than retail sales).

3.3. Option 3: FCSO and Removal of ESB Ring-Fencing

3.3.1. Key Elements of the Proposal

Option 3 is the same as Option 2, except that ESB/EI is relieved of the current ring-fencing obligation, EI is no longer allowed to participate in the DC allocation process,⁵³ and in addition the FCSO on ESB is increased from 70 per cent of its generation to 90 per cent.⁵⁴ This increase in ESB’s obligation increases the minimum volume of ESB’s contract sales (before allowing for DCs and PSOs) by 3.07 TWh, from 10.09 TWh to 13.16 TWh.

3.3.2. Problems with the proposal

Even in Option 3, EI would presumably expect to receive a share of non-DC contracts. Forward contract purchases by EI reduce the power of forward contracting to mitigate ESB’s incentive to exercise its market power – and also deny other suppliers access to hedging products, and as described in section 3.2.6, EI will still have the ability to exercise its buy-side market power. Generator bidding in the I-SEM will be less transparent than in the SEM, and the restrictions on ESB’s bidding in short-term markets will be less restrictive. To achieve the same mitigation of market power, therefore, it would be advisable to increase the quantity of forward contracts issued (sold) by ESB at any time, relative to the volume proposed in Option 2, to the extent that EI can buy up such contracts.

ESB Generation and EI are ring-fenced for the sake of transparency, among other reasons. The prices in contracts between them have the status of transfer prices, whether they are ring-fenced or not. The price that EI pays ESB Generation for forward contracts makes no difference to the profits of the ESB group as a whole. EI can therefore afford to raise the

⁵³ SEM-16-030, p4. “A FCSO supplemented by removal of ring-fencing on ESB/EI, the latter being traded-off against distribution of continued Directed Contracts being allocated to all supplies except Electric Ireland and enforcing a greater proportion of FCSOs from ESB than from other generators”.

⁵⁴ SEM-16-030, pp66-67. “To offset the potential foreclosure of volumes available for trading caused by potential internalisation of hedging within the ESB group, this option proposes that ESB Generation should sell 90% of their forecasted dispatchable volume compared to the 70% approximately under option 2. All other generators continue to offer contracts for 70% of their dispatchable volumes, as under option 2.”

price it bids for ESB's forward contracts, knowing that it will either deny other suppliers access to hedging products, or inflate the costs of its competitors. Both of these outcomes would have a negative impact on competition.

To avoid these effects, it would be desirable to increase the quantity of forward contracts that ESB Generation must sell, and to limit EI's behaviour in the auction so that it cannot inflate contract prices. The proposed ban on EI purchasing DCs could, for instance, be extended into the auction for other forward contracts, or the auction rules could put a limit on the maximum quantity that EI can buy.

Expanding ESB's FCSO from 70 per cent to 90 per cent of its generation would be part of the policy of ensuring that ESB made contracts available to other suppliers, and not just to "the market" (including EI). To ensure that EI had the same access to the available hedging instruments as any other supplier, these restrictions on its purchases would need to reflect the fact that 10 per cent of its generation falls outside the FCSO and is therefore available for internal hedging.

However, it is not clear why it is necessary to drop ring-fencing to achieve these outcomes. Leaving aside the possibility that it is merely a concession to ESB in return for acquiescence to additional controls, we assume that the SEM-C considers the abolition of ring-fencing a necessary condition for implementing the other elements of Option 3. If so, we believe the SEM-C's logic is faulty.

The special status of ESB's generation and supply businesses is already recognised by the company-specific requirement for ring-fencing. The proposal to apply a 90 per cent obligation to ESB Generation, whilst applying a 70 per cent obligation to other companies, also recognises ESB's special status as the dominant firm. If these proposals are feasible, it must be possible to carry over the recognition of that special status into other aspects of the FCSO auction. For instance, the SEM-C might use ESB's special status as a reason to order EI to limit its participation in the auctions, or not to participate at all, without the need to remove ring-fencing obligations. That would achieve all the benefits of Option 3, while maintaining the benefits of ring-fencing ESB.

3.3.3. Conclusion on Option 3

There appears to be no objective reason for dropping the ring-fencing of ESB in order to achieve the other elements of Option 3, ie. the additional FCSO on ESB and the removal of EI from DC auctions. The ring-fencing of ESB remains as desirable now as when it was introduced, so it seems undesirable to drop it.

These other elements (ie. to increase the volume of forward contracts ESB Generation must sell and to limit EI's behaviour in the auction) appear to be desirable in themselves, and are worthy of consideration as amendments to Option 2.

3.4. The DC Component of the FCSO

The Consultation presents a choice between two methods of allocating Directed Contracts (DCs):

- administrative determination of the price in the contracts (accompanied by a rule to allocate them among the suppliers); and
- auctions which allow suppliers to set the price and to determine who receives them.⁵⁵

DCs form only part of the FCSO, so the proposed approach for non-DC contracts issued to meet the FCSO remains opaque. However, given that the purpose of DCs is to constrain ESB's market power (in physical and forward markets, respectively), only administrative pricing and allocation has any chance of success. Auctioning DCs would undermine the purpose of the scheme.

In both methods, the SEM-C would set the volume of DCs. Currently, the SEM-C also sets a rule for allocating these contracts among suppliers. If the SEM-C allows ESB to auction DCs to the highest bidder, two problems will undermine their ability to mitigate market power:

1. EI will be able to bid higher prices than any other supplier, since the price in a contract between ESB Generation and EI is merely a transfer price, with no implications for the profitability of the group as a whole.
 - A. This statement applies whether or not the two businesses are ring-fenced. EI will be able to bid for a large share of the DCs, without fear of over-payment.
 - B. Contracts between ESB Generation and EI do not reduce the incentive for ESB to exercise its market power, again because the contracts have no impact on the profitability of the group as a whole.
 - C. This approach will therefore reduce or invalidate the role of DCs in mitigating ESB Generation's market power.
2. Even if EI is prevented from taking part in the DC auctions, auctions for DCs will not settle at competitive market prices. Instead, the prices bid by other suppliers will anticipate the effect of ESB's market power.
 - A. DCs are a derivative contract whose value depends on the (expected) price of the underlying product, namely physical energy traded in the short term reference market.
 - B. Under current proposals, generator bidding will be less transparent in the I-SEM than in the SEM, but the constraints on ESB's bidding are weaker – mostly *ex post* monitoring.
 - C. If ESB has market power over the reference market used to settle DCs, and is expected to raise prices in that market, the value and auction price of DCs will rise by the same amount.
 - D. Therefore, DCs will not provide any kind of disincentive to the exercise of market power by ESB.⁵⁶

⁵⁵ SEM-16-030, p31.

⁵⁶ This argument does not deny the ability of DCs to mitigate market power. Once in place, DCs with fixed prices diminish the benefit to ESB of raising prices in the reference ("spot") market. However, the situation changes if ESB can influence the prices written into the DCs. Before each auction takes place, ESB has an incentive to threaten to raise

To preserve the stated purpose of DCs as a measure for mitigating ESB's market power, it will be essential to set the prices in those contracts by an administrative method that is not influenced by ESB's behaviour in spot markets (eg. forecasts of *competitive* spot prices). That purpose will be undermined by subjecting contract prices to "derived" market power that reflects actual outcomes in physical spot markets (ie. by running an auction).

The Consultation mentions a "reference price" and maintains that "The existence of this reference price in the auction would continue to allow the Directed Contracts to effectively address concerns about market power but would allow the market to ultimately determine the value of the forward hedge." The precise meaning of this sentence is not clear, since "this reference price" actually refers back to the calculation of a "reserve (minimum) price" for the auction. Such a *reserve* price would have no effect on the incentive of ESB Generation to push up spot prices and the prices of DCs (unless the reference price was so high that ESB had no need to raise it any higher).

The SEM-C may be anticipating some additional rules, under which ESB Generation only receives a *contract* price fixed by the SEM-C in the current fashion, whilst suppliers bid other (higher or lower) prices to acquire the contracts. However, the Consultation does not describe any such rules and does not explain how the rules would handle the (positive or negative) difference between the price paid by bidders and the price received by ESB Generation. This element of any such scheme would be important, as the incentive of ESB Generation to raise spot prices depends on the share of this difference that it (or EI) receives.

The Consultation also seems to hint that auctioning DCs might promote more trading than allocating them, "in so far as valuations differ among participants and change over time".⁵⁷ However, these differences in contract valuation and changes over time will arise regardless of the method used to allocate the contracts. The potential for trading therefore provides no basis for choosing between allocation and auctions.

Thus, auctioning DCs makes no greater contribution to forward market liquidity than allocating them. Moreover, auctioning DCs would undermine their effectiveness in mitigating market power. The Consultation provides no solution to this problem and does not explain how any solution would avoid distorting ESB's incentives.

The discussion of auctions contains a number of oversights and inconsistencies that indicate a lack of care in formulating and describing the proposal, and a cavalier attitude to providing reasons for decisions. We hope this deficiency can be remedied by the time of the final proposals.

future spot prices, in order to drive up the prices that suppliers bid for DC contracts. In order to make that threat credible, ESB has every incentive to show that it can and will raise spot prices as much as possible. Other measures to mitigate market power may not completely remove ESB's ability to raise spot prices in this matter. However, any leeway to raise spot prices will be reflected in the prices of DCs.

⁵⁷ According to the Consultation Paper, auctioning DCs "might lead to trading of these contracts making some contribution to liquidity in the forward market", whereas the current system of allocating DCs exhibits an "absence of secondary trading". SEM-16-030, p31.

3.5. Conclusions on the FCSO

The purpose of the FCSO needs to be restated and its design reconsidered. Rather than aiming at nebulous or arbitrary measures of liquidity, the FCSO is better used to create a level playing field in (ie. to equalise) suppliers' access to hedging products.

The FCSO can achieve this redefined purpose primarily by allocating contracts for the forecast generation of the dominant firm among a number of market participants. The FCSO can also constrain the market power of the dominant player (to the extent that it cannot influence forward contract prices by manipulating spot market prices). Option 2 should therefore be focused on ESB, but its extension to others needs to be justified.

Imposing the FCSO on other generators will not produce any beneficial increase in "liquidity", but would have to be justified by the need to equalise access to hedging products. Some of the generators awarded an FCSO in the current proposal will need to sell all their generation anyway, as they have no supply business; the FCSO would only have any effect if it encourage these generators to replace spot sales with forward sales. Justifying such an extension would require evidence that these generators were relying disproportionately on spot sales to dispose of their output.

Where a company starts with a negative net position (generation less than retail sales), forcing it to sell forward contracts would expose it to additional costs and risks, and to new regulatory burdens, which would harm competition. Omitting such cases from the FCSO would not undermine its redefined purpose of equalising suppliers' access to hedging products

If the SEM-C does eventually decide that the FCSO should include generators other than ESB, the design of the contract portfolio would have to be more closely tailored to each generator's own characteristics, to avoid accusations of discrimination.

Under the FCSO auction proposed by the SEM-C,⁵⁸ EI may have the ability and incentive increase the auction clearing price for all suppliers by increasing the size of its bid. If DCs are allocated through an auction, ESB will be able to exercise its market power, both through its generation arm and its supply arm. To achieve the SEM-C's objectives, the means for allocating FCSOs and DCs must prevent ESB Generation or EI from abusing market power.

Under Option 3, the expansion of ESB's FCSO and the exclusion of EI from DC auctions should be considered as potentially desirable amendments to Option 2. However, ESB Generation would still have the opportunity to abuse its market power in a DC auction. The removal of ring-fencing seems not only undesirable, but also unnecessary, given the widespread recognition of ESB's special status in various other measures.

⁵⁸ SEM-16-030, pp49-31.

4. The Market Maker Obligation

The SEM-C proposed introducing a Market Maker Obligation (MMO) as option 4 of its consultation. If implemented, the MMO would require certain market participants to “quote buy and sell prices for a specified product during specified trading windows on each trading day that the product is traded” so that there are always “quotes available during the market making trading window, even if the quotes [sic] are traded”.⁵⁹

This chapter proceeds as follows:

- Section 4.1 describes the mechanics of the MMO intervention that the SEM-C has proposed;
- Section 4.2 explains that the SEM-C’s reliance on the British and New Zealand examples does not justify the MMO proposed;
- Section 4.3 explains that the SEM-C has not provided robust evidence of the benefits of an MMO, which may be limited and insufficient to outweigh its costs;
- Section 4.4 sets out the risks associated with being subject to an MMO, both in general and specifically to non-dominant obligated companies;
- Section 4.5 explains that removing the ring-fence on ESB would be counterproductive: Doing so would remove an intervention that the SEM-C has previously argued is necessary for competition in the Irish market in exchange for an unproven obligation which may not have pro-competitive benefits; and
- Section 4.6 concludes.

4.1. The Market Making Proposal is an Obligation to Provide Bids and Offers during Market Opening Windows

The MMO proposed by the SEM-C requires certain market participants designated as Market Makers (MMs) to post both a bid price (to buy electricity) and an offer price (to sell electricity) during market trading windows at regulated (maximum) bid-ask spreads.

Between 15:30 and 16:30 on each weekday, designated MMs will be required to make electricity available to buy or sell. MMs must provide price quotations for three types of contract: baseload (24 hours, 7 days per week); mid-merit (14 hours, 5 days per week); and peak (4 hours, 5 days per week). Each type of contract must be available for deliveries in a quarter and in a month. MMs must post prices for each contract on each trading day for 12 months ahead of the year of delivery (roughly 250 days).⁶⁰ The obligation to bid and offer baseload, mid-merit and peaking contracts applies in fixed ratios which reflect the consumption of power at different times in the I-SEM: MMs will be obliged to offer three times as many baseload and twice as many mid-merit contracts as peaking contracts.⁶¹

⁵⁹ SEM-16-030, pp55-56.

⁶⁰ SEM-16-030, p61.

⁶¹ SEM-16-030, p62.

For any particular product, MMs may not post an offer price which is more than 5 per cent higher than its posted bid price.⁶² MMs can move these prices during the trading window, subject to price change limits.

The proposed MMO will apply to companies whose combined market share across generation and supply markets⁶³ exceeds 5 per cent which, the SEM-C argues, “seems a reasonable proxy for market strength.”⁶⁴ Using present data, there are four parties above this threshold: ESB/EI, SSE/Airtricity, Energia and Bord Gáis.

The SEM-C proposes two features to limit MMs’ risk.

First, MMs are subject to a net-exposure cap. The SEM-C has calculated that non-vertically integrated supply companies collectively had a net deficit (a “short position”) of 13.2 TWh in 2015.⁶⁵ The SEM-C defines this level as the “volume requirement” of the MMO.⁶⁶ If the participating companies collectively reach this position in a calendar period, “the MMO is suspended until the next calendar period”.⁶⁷

Each participating company also has its own net-exposure cap, equal to the total cap (13.2 TWh) pro-rated to the size of the company as a share of the participating companies. The specific caps are: ESB, 7.5 TWh; SSE/Airtricity, 2.7 TWh; Energia, 1.6 TWh; and BGE, 1.5 TWh. These caps will be reached in any market making period, if the participating companies trade, on average, 4.4 MW, 1.6 MW, 1.0 MW and 0.9 MW, respectively.

In addition, the SEM-C has proposed a cap on each MM’s net exposure in each market making period, equal to twice the average daily net exposure under the annual cap, to allow for seasonal variation in trading. For example, if ESB achieved a net-trade position (buy or sell) of 8.8 MW in a particular window, it would no longer be obliged to participate in that market making window.

Second, the SEM-C has proposed a price change limit to shield MMs against rapidly moving change in prices. If the “price difference between a MM’s first and last trade in the market making window is more than eg. 4% [... the] quote obligation is suspended until the next market making window”.⁶⁸

4.2. The SEM-C Relies on Precedent from GB that is not Relevant in the All-Island Context

In designing the MMO, the SEM-C has relied on precedents in Great Britain and New Zealand, where market maker obligations already apply.

⁶² SEM-16-030, p62.

⁶³ ie. volume generated plus volume supplied, over total volume generated and supplied.

⁶⁴ SEM-16-030, p61.

⁶⁵ SEM-16-030, p59.

⁶⁶ SEM-16-030, p60

⁶⁷ SEM-16-030, p63.

⁶⁸ SEM-16-030, p64.

In Great Britain, for example, the “Big Six” vertically-integrated energy companies are subject to a mandatory MMO during two hourly windows per trading day. The SEM-C argues that Ofgem imposed the obligations on the Big Six because:

“[These six companies] are the six largest players in the generation and supply market considered as a whole. Because of this, they regularly take both long and short positions and have the capabilities to take a sophisticated view of market prices. This ensures they are able to market make at reasonable cost and risk. Their size is also likely to mean that the costs of meeting the obligation are likely to be small in comparison to their existing businesses.”⁶⁹

New Zealand has had a market maker obligation in place on baseload products since 2010. The scheme is voluntary, and the four largest vertically-integrated companies have signed one-year contracts to participate for each year since then. In 2015, the regulator conducted a consultation into changing the arrangements, including removing the voluntary aspect of it. Ultimately, the regulatory decided to leave the arrangements unchanged.⁷⁰

The precedents from Great Britain and New Zealand are of limited value in justifying the introduction of a similar obligation in I-SEM, for several reasons.

First, the market structures in Great Britain and New Zealand differ considerably from that in the I-SEM. As shown in Figure 4.1, each of the companies in the (so-called) Big Six has a “combined” market share of between 9 and 19 per cent, (taken as an unweighted average of generation and supply market shares).⁷¹ Similarly, Figure 4.2 shows that “combined” market shares in New Zealand range from 15 per cent to 28 per cent.

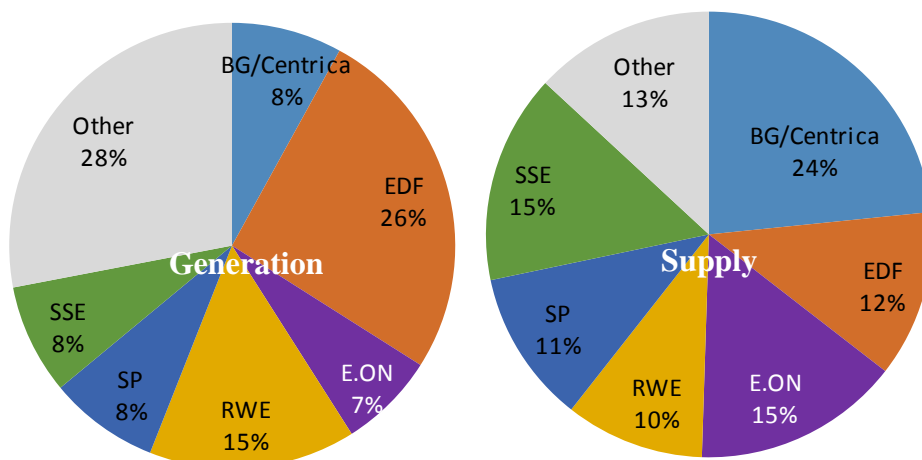
By contrast, as shown in Figure 4.3, the “combined” market shares of the four relevant companies in Ireland are less similar to each other, with ESB having a much larger market share than the other three obligated participants put together. As a result of the more concentrated market structure in the I-SEM, any MMO in the I-SEM will be more susceptible to the abuse of market power and asymmetry in the costs the obligation imposes on market makers.

⁶⁹ Ofgem (12 June 2013), *Wholesale power market liquidity: final proposals for a 'Secure and Promote' licence condition*, p17

⁷⁰ SEM-16-030, pp 97-98.

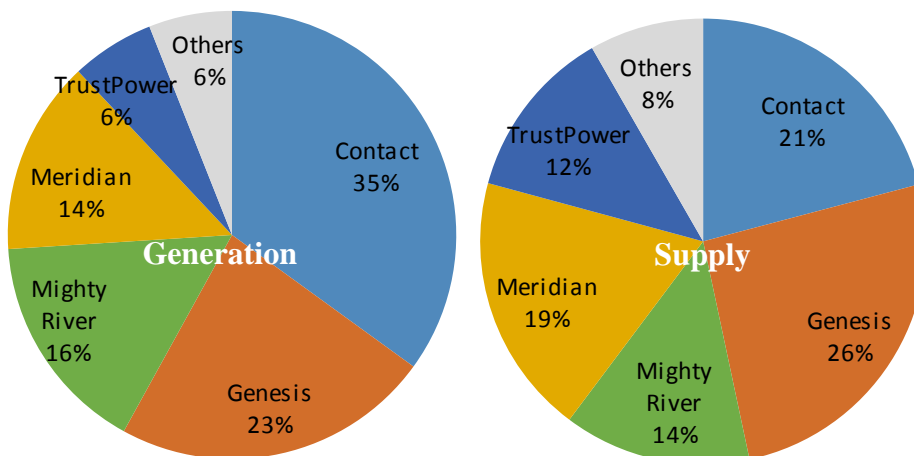
⁷¹ The SEM-C has defined the MMO by reference to the “combined” market share of each generator calculated by summing generation and supply. Summing a company’s shares in production and consumption (or alternatively in two separate markets) is an unorthodox approach which only loosely reflects the approach taken in Great Britain.

Figure 4.1
GB Generation and Supply Market Shares



Source: CMA Energy Market Investigation, pages 177 & 388.

Figure 4.2
NZ Supply and Generation Market Shares

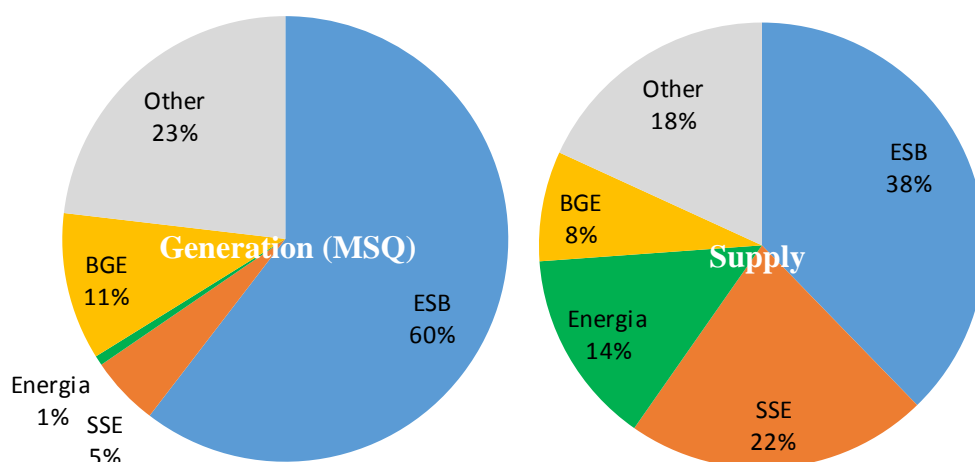


Source: EMI Electricity Authority;⁷² Ministry of Business, Innovation and Employment⁷³

⁷² EMI Electricity Authority, *Market Share Snapshot – 31 January 2015*

⁷³ <http://www.mbie.govt.nz/info-services/sectors-industries/energy/electricity-market/electricity-industry/electricity-generation>

Figure 4.3
SEM Generation and Supply Market Shares



Source: SEM Committee, Table 9

Second, obligated parties in Great Britain and New Zealand have generation and supply portfolios which are more balanced. Because their starting positions are generally less out of balance in Great Britain and New Zealand than in Ireland, they are less likely to be forced into unwanted trades, as discussed in section 4.4 below.

In Great Britain, four of these six companies generate at least half as much as they supply, with only Centrica/British Gas (34 per cent) and E.ON (47 per cent) generating less than half. In New Zealand, Genesis and Meridian generate volumes of electricity equivalent to 89 per cent and 74 per cent of what they supply, whilst the other two companies are long generation.⁷⁴

In the SEM, Energia and SSE/Airtricity each only generate 32 per cent and 43 per cent of the volumes of electricity they supply, respectively.⁷⁵ However, these figures include non-dispatchable generation, which is not relevant to these companies' ability to internally hedge or offer forwards contracts. If we exclude non-dispatchable generation and focus on Market Supplied Quantities (MSQ) rather than total production, the shares of supply covered by generation fall to 4 per cent and 17 per cent for Energia and SSE/Airtricity respectively.⁷⁶

The volume of dispatchable generation driven by market prices, rather than reserves or network constraints was not readily available for Great Britain and New Zealand. However, the disparity between market shares with and without market-dispatchable generation is likely to be less significant in Great Britain because penetration of non-dispatchable

⁷⁴ Supply market shares in Great Britain and New Zealand are given in terms of connections, so we assume that there is no systematic difference between companies in the volume supplied to their average connection point.

⁷⁵ SEM-16-030, p59.

⁷⁶ SEM-16-030, pp 49 & 59.

generation is lower.⁷⁷ Similarly, New Zealand's generation portfolio is dominated by dispatchable hydroelectric power, with each of the four obligated companies relying on hydro plants as a principal source of generation.⁷⁸

Third, obligated parties in Great Britain are bigger companies than the proposed MMOs in the I-SEM. The smallest supply arm of the Big Six, RWE npower, supplies approximately 29 TWh per year.⁷⁹ By comparison, the entire supply industry in Ireland (ROI and NI) supplies approximately 33 TWh per year.⁸⁰ The smallest supplier obligated by the proposed MMO in Ireland (BGE) supplies just 2.6 TWh per year. If a company's size is a measure of its ability to manage the risks imposed by an MMO, then the companies obligated in Great Britain are poor comparators for those in Ireland.

Fourth, the New Zealand scheme operates in a market similar in size to Ireland but is voluntary.⁸¹ The MMO applies to four companies but the fifth major company, Trust Power, declined to participate.⁸² The SEM-C characterises its reasoning for not participating as being "because of lack of firm generation in its portfolio"⁸³ and "a view that the risks it faced were disproportionate in comparison with the businesses that volunteered".⁸⁴ As shown in Figure 4.2 above, Trust Power's market share in generation is only half its market share in supply, and so would risk being forced into unwanted sales, similarly to Energia and SSE. Far from justifying the implementation of a mandatory MMO, this precedent from New Zealand illustrates that an MMO imposes disproportionate costs on smaller or less-balanced market participants, and that the regulator acknowledges these asymmetrical risks.

⁷⁷ The CMA notes that each of the Big Six's generating portfolios is based primarily on non-intermittent generation: The eight largest owners of generating capacity have very different portfolios of technologies, as shown for 2014 in Figure 4.8. Drax owns a single plant, part coal, part biomass. Centrica has mostly chosen to own gas and nuclear plant; "Drax is a single-plant owner exposed to coal and to a small degree to biomass; at the time the data was compiled, E.ON was mostly a coal and gas owner, with a small wind portfolio (since then, the coal and gas plant has been separated out into a different and fully separate company, Uniper); EDF Energy owns nuclear, coal and gas assets with a small wind portfolio; RWE is mostly a coal and gas owner, with some oil and some wind; Scottish Power is a coal and gas owner with some wind and hydro; SSE owns coal and gas, with some hydro, pumped storage and wind."

Source: CMA (24 June 2016), *Energy Market Investigation: Final Report*, para 4.40.

⁷⁸ <https://www.contact.co.nz/corporate/about/our-company/generation>; <https://www.genesisenergy.co.nz/generation-assets>; <https://www.mercury.co.nz/Our-Business/Generation.aspx>; <https://www.meridianenergy.co.nz/about-us/our-power-stations/hydro>

⁷⁹ We use supply market shares from page 388 of the CMA Energy Market Investigation, multiplied by total consumption in Great Britain, taken from the Digest of UK Energy Statistics 2015. Note that the market shares presented by the CMA are in terms of customers rather than volume, so our estimate of RWE's supply volume relies on the assumption that it has a similar market share when measured in terms of volumes.

DECC (2015), *Digest of UK Energy Statistics 2015*, p123

⁸⁰ SEM-16-030, p59.

⁸¹ Annual consumption of about 40 TWh compared to 33 TWh in Ireland. New Zealand Ministry of Business, Innovation & Employment (2015), *Annual electricity generation and consumption – Data tables*

⁸² SEM-16-030, p95.

⁸³ SEM-16-030, p97.

⁸⁴ SEM-16-030, p54.

Finally, the choice of four market makers in Ireland is arbitrary, since the SEM-C does not provide an objective justification for selecting this number, stating only that “5% share of generation plus supply seems a reasonable proxy for financial strength”.⁸⁵ As far as is evident from the consultation document, the SEM-C has not performed a detailed examination of companies’ balance sheet strength or the costs of the obligation that would justify imposing an MMO with a five per cent market share. The SEM-C rejects the use of a single market maker on the basis that relying on one market maker “is not common”. However, in practice, creating any kind of MMO “is not common”. The SEM-C has relied on evidence from only two case studies to establish whether a single market maker is common. Markets in other sectors, such as the New York Stock Exchange, employ single market makers.⁸⁶

4.3. The Benefits of a Market Making Obligation are Unclear

The SEM-C states that the purpose of its proposed intervention is to “promote liquidity [and] therefore facilitate new entry in generation and supply, reduce the ability of any market participant to manipulate the market, increase confidence in prices and thus facilitate trading and investment”.⁸⁷ As described in chapter 3 above, the SEM-C does not identify a market failure that the MMO would solve, which makes the benefits of any intervention unclear. Simply observing that the I-SEM experiences poor liquidity does not justify creating a Market Maker Obligation, if the MMO will not remedy the underlying causes of illiquidity.

An MMO requires market participants to post bids and offers in the specified trading windows. Such an obligation does not guarantee access to power at reasonable prices. If large players are able to exercise market power, an MMO will not provide access to hedges at competitive prices to underpin a competitive retail market. As proposed by the SEM-C, ESB will have a 57 per cent share of the contracts offered under the MMO. From the perspective of an obligated market maker, ESB has an even larger share of the obligated contracts to be offered during the window because the obligated market maker may only trade with ESB or the two other market makers.

The MMO is an intervention targeted at improving one measure of notional liquidity rather than at an underlying market failure that prevents liquidity from developing, which as discussed in chapter 2, is unlikely to increase competition and lower prices. Even in that narrow objective, however, it may not be successful. An MMO may still cause the market price to move as a direct result of a particular purchase, if MMs change the prices they quote following a large trade simply to help them close out their position. Accordingly, the MM fails to offer one of the two key attributes of liquidity relied upon by the SEM-C: that “[p]arties must be able to trade ‘reasonable’ volumes without significantly moving market prices”.⁸⁸

⁸⁵ SEM-16-030, p61.

⁸⁶ Bloomberg News (17 April 2012), *NYSE Plans to Let More Brokerages Become Market Makers*, retrieved 22 July 2016. url: <http://www.bloomberg.com/news/articles/2012-04-17/nyse-plans-to-let-more-brokerages-become-market-makers>

⁸⁷ SEM-16-030, p7.

⁸⁸ SEM-16-030, p9.

The SEM-C does not quantify the benefits of the MMO and appears to rely largely on the presence of a similar MMO in GB. In practice, the evidence that the MMO in GB has led to an increase in liquidity is limited.

In its recent inquiry into the energy market in Great Britain, the Competition and Markets Authority found no evidence that the MMO measures had improved liquidity overall, but merely that trading had concentrated somewhat in the specified trading windows. The CMA stated specifically: “the changes caused by S&P are relatively marginal and do not seem likely to attract financial participants into (or back into) electricity trading. It has been put to us that this type of market participant needs good liquidity throughout the day, and that there will not be a ‘step change’ in the level of liquidity unless this type of player is attracted to the market”.⁸⁹

By contrast, the CMA reported that Ofgem had found that positive effects on competition had resulted from the other leg of the Secure and Promote obligation, the Supplier Market Access rules:

“Based on feedback from stakeholders, Ofgem reported that independent suppliers were finding it easier to access products under the Supplier Market Access rules. Ofgem noted that independent suppliers were still finding credit and collateral to be an issue”.⁹⁰

British experience suggests that the introduction of an MMO is not likely to improve liquidity, resolve any market failure driving the lack of competition and liquidity, or bring in financial participants. By contrast, rules to ensure access to forward contracts (rather than merely promoting frequent trades) and reducing barriers to trade (eg. competitive contractual and credit terms) may help to promote competition.

4.4. The MMO Imposes Costs and Risks on Market Makers

The Consultation devotes just thirteen lines to a discussion of the costs and risks that the MMO imposes, and that short section includes a description of hypothesised benefits to obligated parties.⁹¹ The SEM-C notes that “the requirement to continuously post prices will entail additional risks”, but it does not spell out or quantify these risks in any detail. Moreover, the SEM-C summarises the costs of market making briefly, as “mainly related to the expertise and business processes to be put in place for proper risk management”.⁹² In the absence of a regulatory obligation, the SEM-C asserts, market participants cover the risks and costs of market-making by adjusting the bid-ask spread and therefore that the “obligated bid/ask price spread limits should be reasonable”.⁹³

⁸⁹ CMA (24 June 2016), *Energy Market Investigation: Final Report – Appendix 7.1*, para. 92.

⁹⁰ CMA (24 June 2016), *Energy Market Investigation: Final Report – Appendix 7.1*, para. 127.

⁹¹ SEM-16-030, p56.

⁹² SEM-16-030, p56.

⁹³ SEM-16-030, p56.

However, the SEM-C does not provide any evidence that the bid-ask spreads it intends to impose are reasonable or cover the risks and costs faced by obligated parties. On the one hand, if the SEM-C allowed bid-ask spreads wide enough to accommodate the risks of market makers, the MMO could become ineffective, as companies could set and position a wide enough bid-ask spread to guarantee that they only buy (if they are short), only sell (if they are long) or do not trade if they do not wish to.⁹⁴ On the other hand, narrow risk spreads would lead to large risks for the market makers as the likelihood of being forced into unwanted trades would increase. Moreover, the risks faced by short market makers are larger than those faced by ESB because they have a larger position to close, and so are more likely to be placed in a short position that is difficult to close. Accordingly, uniform bid-ask spreads place disproportionate risk discriminate against market participants who are short of power.

4.4.1. The MMO may force loss-making trades and increase the cost of capital

After the imposition of a Market Maker Obligation, participating companies (MMs) face the risk of being forced to trade at unattractive prices, whenever the regulated bid-ask spreads are insufficient.

For instance, assume that a MM starts in a net short position and posts a bid price for purchasing electricity. Because it is subject to the mandatory market making obligation, its offer price must be no more than five per cent higher than its bid price. Another trader may accept the MM's offer, but the MM may be unable to find a matching offer that accepts its bid price. As a result of the offer being accepted, the MM becomes even shorter. To remedy the impact of this forced sale, the MM can, in principle:

- buy back the power as soon as possible at the (new) market price to close out the position; or
- hold the position open and wait for market prices to change.

In the first case, the MM might be able to buy back the contract at a price close to the price at which they sold. However, in a rising market it could find itself having to buy at a price above its sale price and so incurring a loss, as demonstrated in Box 4.1.

In the second case, holding an open position for any significant amount of time requires the obligated party either to hold risk capital or to risk a deterioration of its credit rating. The SEM-C has not estimated the cost of additional risk capital or any increase in the cost of financing,⁹⁵ nor does it recognise the cost of working capital as an important cost for obligated MMs.

⁹⁴ For example, if the underlying value of a product is €50, a company could set its bid-ask prices at €50/€80 if it needed to buy, €20/€50 if it needed to sell, or €35/€65 if did not want to trade, assuming a constant spread of €30.

⁹⁵ SEM-16-030, p56.

Box 4.1
Example of the Impact of an MMO on a Short Seller

Assume that there are two market participants: Market Maker A (“MM-A”), who is short, and Market Maker (“MM-B”), who is long.

At 15:30, MM-A bids of €48.8/MWh with the intention of purchasing 10MW electricity to remedy its shortfall. Because it is an obligated Market Maker, MM-A must also post an offer price no more than 5 per cent above its bid price, in this case €51.3/MWh. Market Maker B quotes offers at the higher price of €53.8, with the intention of selling 10 MW of electricity. Due to regulatory requirement to bid no more than 5 per cent below its offer price, MM-B bids €51.3/MWh. As a result, MM-B instead purchases 10 MW for €513 from MM-A.

At 15:40, MM-A increases its bid price to purchase back from MM-B and increases its offer price to dissuade MM-B from purchasing more. However, MM-B also raises its bid and offer prices and purchases another 10 MW at €51.9/MWh for €519.

Finally, at 15:50, MM-A increases its bid and offer price to €53.4 and €56/MWh in order to close out its position and to ensure that it manages its risks. MM-B increases its bid and offer prices to €50.8 and €53.4/MWh. MM-A finally purchases the 20 MW from MM-B for €1,067. As a result, MM-A loses €35 and MM-B gains €35.

Table 4.1
A net Short MM might sell at one price and then be forced to buy back at a higher price

	Time	15:30	15:40	15:50
Market Maker A				
Offer	€/MWh	51.3	51.9	56.0
Bid	€/MWh	48.8	49.5	53.4
Trade	MW	-10.0	-10.0	20.0
Net Position	MW	-10.0	-20.0	0.0
Trade	€	-513	-519	1067
Net Position	€	-513	-1032	35
Market Maker B				
Offer	€/MWh	53.9	54.5	53.4
Bid	€/MWh	51.3	51.9	50.8
Trade	MW	10.0	10.0	-20.0
Net Position	MW	10.0	20.0	0.0
Trade	€	513	519	-1067
Net Position	€	513	1032	-35

4.4.2. The impact of the MMO is asymmetric and will impose different costs and risks on market participants

The SEM-C identified obligated market participants and allocated the market making obligation based on their combined market share of generation and supply.⁹⁶ This is an unorthodox measure of size. Combined market share does not reflect the capacity of market participants to offer market-making services. The MMO imposes costs on market participants in an asymmetric manner that may distort competition for at least three reasons.

4.4.2.1. Obligations to offer contracts in a perennially short market

Firstly, having a larger supply market share does not make a market participant better able to make the market by *selling* forward contracts. Parties who can best bear the costs and risks of an MMO are those who *hedge both production and supply* in the forward market. In the Consultation, the SEM-C argues that the costs imposed by market making may be reduced because MM would be trading power anyway:

“One aspect of market making is that it is a route to market for that party’s own hedging requirements. The party would be trading in hedging products anyway and should be dynamically managing its portfolio of contracts based on forecasts of average spot prices and forecasts of changes in its physical portfolio of both generation and off-take”.⁹⁷

The SEM-C’s position is based on a misconception. In practice, in a market where the total supply of forward contracts is perennially lower than the demand, market participants who are short may not be buying *and selling* “dynamically”. Such firms will have a carefully considered plan for the initial marketing of their generation (perhaps by assigning it to their supply business), but once this quota is met they will normally be aiming only to *buy* contracts rather than to *sell*, given their overriding need to hedge their downstream risk. Market participants who are short may therefore respond to a forecast reduction in their net short position by *adjusting the speed at which they buy forward contracts*, rather than by selling contracts. Forcing such companies to sell forward contracts (by obliging them to post offers) will not overlap with their normal business activities, but may harm their ability to compete by drawing them into new and risky activities.

Simple comparisons of volume generated do not reflect the shape that the supply businesses will need to meet the load of its customers and therefore will not properly reflect the need that any business has to trade forward contracts. In the I-SEM only ESB and BGE have vertically-integrated generation and supply businesses that are roughly in balance and might therefore be expected both to buy and to sell forward contracts. SSE/Airtricity and Energia are both short of power and generate 17 per cent and 4 per cent of the dispatchable volume

⁹⁶ Note, Table 9 on page 59 of the Consultation paper suggests that the SEM-C calculates the combined market shares of generation and supply on market scheduled quantities (“Table 9: Company shares of combined generation plus supply MSQ, 2015”). However, the generation MSQs in Table 8 on page 51 are not equal to the alleged generation MSQs in Table 9. Given the absence of references to MSQ in the surrounding text on page 59, we have assumed that the insertion of MSQ into the title of the table is a typographical error and the table presents total generation and supply.

⁹⁷ SEM-16-030, p56.

they supply, respectively.⁹⁸ These two companies can be expected only ever to enter the market to buy forward contracts, not to sell them.

4.4.2.2. Contract obligations unrelated to the shape of physical generation

Second, not all the generation of obligated market participants is equivalent for the purpose of offering forward contracts. The proposal to require all MMOs to offer contracts in fixed ratios does not therefore have similar effects on every company:

3. Non-dispatchable generation cannot to guarantee delivery in future periods and its revenue is already set independently of market prices by the REFIT scheme selling forward contracts would expose non-dispatchable generation to market price risk;⁹⁹
4. Generation that operates to resolve network constraints is not remunerated at market prices and is therefore unable to hedge by selling forward contracts on the market;
5. Some of the proposed MMOs do not generate in the proportions of baseload, mid-merit and peaking products that obligated parties are required to offer.

Thus, imposing the same MMO on all the companies will impose more market risk on those with a higher proportion of non-dispatchable generation, whose output is used outside the market to resolve transmission constraints, and/or whose generation is not a balanced portfolio.

The use of combined generation and supply as a basis for inclusion in and allocation of the MMO is therefore not an efficient basis (ie. cost-minimising basis) for identifying which parties should be obligated and allocating the obligation. The uneven allocation of costs may also be discriminatory.

The SEM-C has not been consistent in deciding how to measure a company's size or ability to issue forward contracts. At various points in the Consultation, the SEM-C argues that dispatchable generation is "best placed to offer forward hedges"¹⁰⁰ and repeatedly relies on Market Scheduled Quantity (MSQ) to illustrate the volume of electricity available for hedging.¹⁰¹ In designing the FCSO (see chapter 3, above), the SEM-C also relied on MSQ, rather than the combined market share of (total) generation and supply, as a proxy for the ability to offer forward contracts to the market. At a minimum, the SEM-C should adopt a more consistent view of the ability to take on forward contracting obligations; in practice the SEM-C should only obligate companies with a balanced position, calculated on the basis of *dispatchable, Market Scheduled Quantity*.

⁹⁸ SEM-16-030, p59.

⁹⁹ SEM-16-030, p25.

¹⁰⁰ SEM-16-030, p16.

¹⁰¹ SEM-16-030, pp 16, 17, 18, 25, 49, 51, 59, 71, 72 and 75.

4.4.2.3. Creating the potential for abuse of market power

Thirdly, the introduction of the MMO provides an additional mechanism through which ESB would be able to leverage its market power over other market makers. The size of the MMO on each company is proportional to its combined market share. Accordingly, ESB will have a 57 per cent share of the MMO. After its offers had been accepted, any market maker returning to the market immediately to close out its expanded short position would be vulnerable to anti-competitive abuse by ESB.¹⁰² In principle, ESB could engineer a “short squeeze” by buying contracts from the other market makers and then raising its offer price to make a profit, secure in the knowledge that all the other market makers would have to return to the market as distressed buyers.

Moreover, the risks faced by SSE and Energinet will be readily apparent to all relevant parties, most importantly ESB. ESB will thus have the opportunity to exercise its market power and exploit the flaws of the MMO.

The Consultation does not mention market power at all in its analysis of the MMO and is therefore incomplete.

4.4.3. The MMO may impose additional costs of regulatory compliance

The MMO may expose obligated parties to the costs of additional European financial regulation, in particular under the revised Markets in Financial Instruments Directive (MiFID II) and other financial legislation. Complying with financial legislation could impose significant costs on MMs.

In response to the initial consultation on the Secure and Promote proposals in Great Britain, some respondents (including SSE) were concerned that the MMO was not ‘future-proofed’ against any of the adverse consequences of MiFID II, and argued that a sunset clause should be included in the S&P license condition.¹⁰³ In its consultation document of November 2013, Ofgem said it would review the impact of MiFID II before it was implemented in the UK.¹⁰⁴ In the final decision document in January 2014, Ofgem announced that the licence condition would allow a licensee to submit a non-binding request for a review. It also allowed licensees to nominate a third party to deliver their Market Making Obligation, enabling them to appoint a third party who was already operating within the scope of European financial legislation (and who would in any case have to accommodate any changes in that legislation). The implementation date of MiFID II is delayed until 3 January 2018, so Ofgem has not carried out its review.^{105,106} The implications of MiFID II remain unclear for the MMO in Britain, but they will almost immediately be relevant to any MMO adopted at the start of the I-SEM, and hence to the design of any MMO at this stage.

¹⁰² SEM-16-030, p63.

¹⁰³ SSE Response, *Wholesale power market liquidity: final proposals for a 'Secure and Promote' licence condition*, p2.

¹⁰⁴ Ofgem, *Wholesale power market liquidity: statutory consultation on the 'Secure and Promote' licence condition*, p23.

¹⁰⁵ Council of the EU, *Press Release 17/06/2016*, p1.

¹⁰⁶ Ofgem, *Wholesale power market liquidity: statutory consultation on the 'Secure and Promote' licence condition*, p23.

4.5. Introducing the MMO does not Justify Removing the Ring-Fence on ESB

The SEM-C has proposed removing the regulatory ring-fence on ESB/EI if it institutes the MMO:

“Given the two sided obligation (Buy and Sell) on market participants, the SEM Committee is of the view that this type of obligation would be a more proportionate intervention measure if applied to vertically integrated companies but acknowledge that, ultimately, it is the financial strength of the market maker that supports the activity and not their physical position in the market. Potentially, a completely non-physical party could establish a market-maker function in offers of CfDs, which are purely financial products. However, in the context of a regulatory intervention, it is reasonable that it be applied on market participants with significant market shares. Therefore, this measure would work more efficiently within a scenario where ESB is allowed to be vertically integrated. Therefore this intervention relies upon the Removal of Trading Barriers and removal of the ring-fencing of ESB).”¹⁰⁷

The SEM Committee's position is inconsistent: it argues that ESB's ring-fence should be removed to enable the vertical integration required by its MMO, but also that financial strength is required to take on the risk of an MMO, not vertical integration.

If it is *not necessary* for a company to be vertically-integrated, but only to be financially sound, then the SEM-C should allocate the MMO according to *financial strength* of the parent group, regardless of company structure. The SEM-C could also impose separate MMO obligations on ESB and EI provided each were sufficiently credit-worthy. It would not be necessary to remove the ring-fence on ESB.

If it is *necessary* to be vertically-integrated to bear the cost of the MMO efficiently, then in principle it may be necessary to remove the ring-fence to impose the MMO, but the Consultation advises otherwise. In any case, vertical integration is a matter of degree. Market participants who are vertically integrated, but who have a large deficit of generation relative to their supply business would not be able to bear the obligation efficiently.

Of the two obligated MMs identified by the SEM-C, two generators are markedly short of dispatchable generation: SSE/Airtricity and Energia generate 17 and 4 per cent respectively of the total annual volume they supply. Over various time periods within each year, they are probably even less vertically-integrated, given the different time profiles of their production and sales.¹⁰⁸ This degree of vertical integration will not provide much benefit for reducing the cost of managing MMO risk, compared with the more closely balanced position of ESB, as described in section 4.1 above. Therefore, while simultaneously suggesting that vertical integration is necessary to be a market maker, the SEM-C proposes to impose the MMO on

¹⁰⁷ SEM-16-030, p53.

¹⁰⁸ SEM-16-030, p59.

companies which are effectively not vertically integrated. This reasoning is internally inconsistent.

Allocating an obligation for which vertical integration is necessary to deliver cost effectively, but irrespective of the degree of vertical integration will create inefficiency and higher costs for consumers. Not only will those costs feed directly into wholesale and retail prices, but they may create incentives to adopt inefficient ownership structures, such as separating the ownership of generation and supply businesses to circumvent regulatory obligations.

Removing the ring-fence on ESB to impose the MMO may therefore run counter to consumers' interests. In order to ensure that the MMO is welfare-enhancing, the SEM-C would need to demonstrate that the benefits of the MMO offset the costs of removing ESB's ring-fence. The Regulatory Authorities have repeatedly opined that removal of the ring-fence would run counter to consumers' interests and reduce forward market liquidity, as discussed in chapter 2 above. However, in the Consultation the SEM-C does not consider any of the costs of removing the ring-fence on ESB.

4.6. Conclusion

The MMO attempts to treat the symptom rather than the cause of illiquidity. The MMO does not address the structural shortage of hedges in the I-SEM or the existence of a dominant market participant with a balanced portfolio. As a result, the MMO offers no guarantee of access to forward contracts at reasonable prices. Lack of access to forward contracts limits new entry in generation and supply and may encourage the exit of existing market players. Moreover, because of ESB's position and the unnecessary and asymmetrical risk imposed by the MMO, competition in the I-SEM is likely to worsen as a result of its introduction.

The SEM-C does not provide detailed reasoning to support imposing a MMO in the I-SEM and instead relies on precedents from Great Britain and New Zealand. The market structures in Great Britain and New Zealand are markedly different to those in the I-SEM. Moreover, in Great Britain the evidence on whether the MMO has improved liquidity is mixed. The SEM-C does not therefore have robust evidence either for the specific design of MMO or for asserting that the imposition of an MMO will achieve its stated aim of increasing liquidity in the I-SEM.

In practice, imposing an MMO is likely to impose significant costs and risks on market participants. The SEM-C has not considered the costs and risks associated with the MMO, in particular the potential increase in the cost of capital, which could increase prices for consumers.

Furthermore, the SEM-C does not present clear reasoning for the removal of ESB's ring-fence.

- If it is necessary to be vertically-integrated to bear the cost of the MMO efficiently, companies with a large short position ought to be exempt, but that is not the position adopted by the SEM-C in the Consultation.

- If it is only necessary to have financial strength, and not vertical integration, to bear the cost of the MMO efficiently, then there is no basis for the proposal to remove ESB's ring-fence.

The SEM-C and its consultants have repeatedly asserted that the ring-fence is necessary to control ESB's market power and to increase liquidity in the SEM. Removing the ring-fence can only worsen ESB's incentives to trade power in forward markets, runs counter to the SEM-C's stated objectives for the F&L workstream of improving competition¹⁰⁹ and may increase costs for consumers. Any proposal to remove ESB's ring-fence would therefore require a much stronger argument than any presented in the Consultation.

¹⁰⁹ SEM-16-030, p7.

5. Hybrid FCSO and MMO Option

The SEM-C's Options 2 and 3 require the implementation of the FCSO (ie. with and without removing ESB's regulatory ring-fence) and Option 4 requires the implementation of the MMO. We have described these in chapters 2 and 3 above.

As its final option, the SEM-C has proposed a hybrid of the FCSO and the MMO, with the removal of ESB's regulatory ring-fence. The SEM-C justifies the consideration of this hybrid option because "while the MMO [...] would provide market access and price discovery in the forward market, it would not necessarily provide sufficient volume of hedging contracts to meet market participant expectations unless the MMOs were exposed to an extent which they may consider excessive".¹¹⁰

The SEM-C defines option 5 as follows:

- The starting point on the FCSO is Option 3 (described in section 3.2), which involves removing the ring-fence on ESB/EI and places additional restrictions and targets on the newly integrated companies;
- The *de minimus* threshold for a generator participating in the FCSO is doubled from 267 GWh to 533 GWh.¹¹¹ This reduces the number of participating generation companies from eight to seven (with PPB no longer obligated).
- The volume of contracts to be offered by obligated companies is reduced by 50 per cent (proportionally across participating companies).
- The MMO would function identically to the version described in chapter 4, with the same four participating companies, but the net exposure cap would be reduced by 50 per cent. For example, whereas ESB has a net exposure cap of 7.5 TWh per year in the pure MMO (equivalent to 4.4 MW per window), it has a cap of 3.7 TWh per year in the hybrid option (equivalent to 2.2 MW per window).

Our arguments regarding the FCSO and the MMO are equally valid for the combination of the two. There is no reason to believe that the inclusion of the FCSO would offset the negative effects of the MMO, or vice versa. In fact, by combining the FCSO and the MMO the SEM-C may worsen liquidity compared to options 2 to 4, because option 5 reduces the ability of the FCSO to spread hedging opportunities among all market participants.

The FCSO component of Option 5 is smaller than in Options 2 and 3. In the absence of an obligation such as an FCSO, ESB may have a limited incentive to offer forward contracts on its generation (as discussed in chapter 3 above). An obligation on ESB is thus necessary to allow suppliers who are short of generation equal access to hedging instruments, as required to promote competition. By reducing the size of the obligation in the hybrid option, the SEM-C reduces the availability of such instruments and limits independent suppliers' access to hedging.

¹¹⁰ SEM-16-030, p81.

¹¹¹ SEM-16-030, p81.

With respect to the MMO, the lower net exposure cap under Option 5 compared to Option 4 decreases risk for obligated companies (especially those in short positions). However, the undesirable consequences of the MMO set out above remain a concern, and the overall risk may not decrease for companies which are obligated under both the FCSO and the MMO.

This option also involves the removal of the regulatory ring-fence on ESB Generation and EI. For the reasons set out in sections 2.7, 3.3 and 4.5, the removal of the ring-fence is not justified and will ultimately worsen competition in the I-SEM.

In summary, the change in size associated with the hybrid option limits the size of the benefits (as well as some of the risks) of the FCSO, and limits the size of the risks of the MMO. However, the fundamental flaws present in each of the pure policy options persist in the hybrid option.

6. Conclusion

The SEM-C has proposed five options to improve liquidity in the I-SEM forward market. We have reviewed options 2 to 5 in this report, and conclude as follows. Our conclusions are as follows.

The SEM Committee's Proposed Interventions Fail to Identify the Underlying Market Failure or Demonstrate that the Benefits of Intervention Exceed the Costs

The SEM-C's Consultation is poorly founded. Liquidity, however the SEM-C defines it, is the by-product of a competitive industry. Implementing a measure that increases a particular measure of liquidity does not improve competition, which is the SEM-C's ultimate goal.¹¹² SEM-C's efforts would be better focused on using forward contracts to mitigate ESB's market power and to transfer title over generation from ESB to suppliers who are short of generation. This would allow non-dominant companies to compete on an equal basis with ESB and will ultimately lower prices for consumers.

Although the F&L Workstream cannot hope to promote a liquid market, it can help traders compete more effectively by helping to provide a level playing field for hedging. The SEM-C's dismissal of market power in the forward market is an over-simplification. In particular, the SEM-C's position is based on a misunderstanding of effect of hedging, the costs of adopting a speculative contract position, and the consequent barriers to entry into forward markets.

Measures to promote liquidity are not costless and are not guaranteed to produce a positive net benefit for society. Many of the interventions proposed in the Consultation would impose additional costs and risks on the affected companies. Often, this burden would be felt more heavily by non-dominant companies with a less diversified portfolio of generation, a side-effect that is harmful to competition.. To justify each intervention, therefore, the SEM-C would need to provide objective evidence not only that each measure is "aimed" at a problem, but also that each measure is likely to produce a well-defined and beneficial outcome whose benefits exceed the costs of intervention.

The Forward Contract Sell Obligation (Options 2 and 3) Is Not Targeted Enough

The purpose of the FCSO needs to be restated and its design reconsidered. Rather than aiming at nebulous or arbitrary measures of liquidity, the FCSO is better used to create a level playing field in (ie. to equalise) suppliers' access to hedging products.

The FCSO can achieve this redefined purpose primarily by allocating contracts for the forecast generation of the dominant firm among a number of market participants. The FCSO can also constrain the market power of the dominant player (to the extent that it cannot influence forward contract prices by manipulating spot market prices). Option 2 should therefore be focused on ESB, but its extension to others needs to be justified.

¹¹² SEM Committee, *Integrated Single Electricity Market (I-SEM) – Measures to promote liquidity in the I-SEM forward market – Consultation Paper (SEM-16-030)*, p8.

Imposing the FCSO on other generators will not produce any beneficial increase in “liquidity”, but would have to be justified by the need to equalise access to hedging products. Some of the generators awarded a FCSO in the current proposal will need to sell all their generation anyway, as they have no supply business; the FCSO would only have any effect if it encourage these generators to replace spot sales with forward sales. Justifying such an extension would require evidence that these generators were relying disproportionately on spot sales to dispose of their output.

Where a company starts with a negative net position (generation less than retail sales), forcing it to sell forward contracts would expose it to additional costs and risks, and to new regulatory burdens, which would harm competition. Omitting such cases from the FCSO would not undermine its redefined purpose of equalising suppliers' access to hedging products

If the SEM-C does eventually decide that the FCSO should include generators other than ESB, the design of the contract portfolio would have to be more closely tailored to each generator's own characteristics, to avoid accusations of discrimination.

Under the FCSO auction proposed by the SEM-C,¹¹³ EI may have the ability and incentive increase the auction clearing price for all suppliers by increasing the size of its bid. If DCs are allocated through an auction, ESB will be able to exercise its market power, both through its generation arm and its supply arm. To achieve the SEM-C's objectives, the means for allocating FCSOs and DCs must prevent ESB Generation or EI from abusing market power.

Under Option 3, the expansion of ESB's FCSO and the exclusion of EI from DC auctions should be considered as potentially desirable amendments to Option 2. However, ESB Generation would still have the opportunity to abuse its market power in a DC auction. Furthermore, the removal of ring-fencing seems not only undesirable, but also unnecessary, given the widespread recognition of ESB's special status in various other measures.

The Market Maker Obligation (Option 4) Imposes Unnecessary Risks and Costs Without Evidence of Offsetting Benefits for Consumers

The MMO attempts to treat the symptom rather than the cause of illiquidity. In particular, the MMO does not address the structural shortage of hedges in the I-SEM or the existence of a dominant market participant with a balanced portfolio. As a result, the MMO offers no guarantee of access to forward contracts at reasonable prices. Lack of access to forward contracts limits new entry in generation and supply and may encourage the exit of existing market players. Moreover, because of ESB's position and the unnecessary and asymmetrical risk imposed by the MMO, competition in the I-SEM is likely to worsen as a result of its introduction.

The SEM-C does not provide detailed reasoning to support imposing a MMO in the I-SEM and instead relies on precedents from Great Britain and New Zealand. The market structures in Great Britain and New Zealand are markedly different to those in the I-SEM. Moreover, in

¹¹³ SEM-16-030, pp49-31.

Great Britain the evidence on whether the MMO has improved liquidity is mixed. The SEM-C does not therefore have robust evidence either for the specific design of MMO or for asserting that the imposition of an MMO will achieve its stated aim of increasing liquidity in the I-SEM.

In practice, imposing an MMO is likely to impose significant costs and risks on market participants. The SEM-C has not considered the costs and risks associated with the MMO, in particular the potential increase in the cost of capital, which could increase prices for consumers.

The FCSO/MMO Hybrid (Option 5) Does Not Remove the Risks of Each Component, and Limits the Effectiveness of the FCSO

The SEM-C's Option 5 comprises a hybrid of the FCSO and the MMO, with the obligations on each half as large as in the pure policy options. The underlying flaws of each component remain in the hybrid version. Moreover, the hybrid option also limits the possible benefits present in the FCSO: the lower obligation to sell power forward may reduce access to hedging for suppliers who are short and thus hinder competition in the retail market.

The Removal of the Ring-Fence is Unnecessary and Hinders Competition

In Options 3, 4 and 5, the SEM-C has proposed variants that remove the ring-fence between ESB-Generation and EI. It is not clear why this element of the proposal is necessary to the functioning of either of these obligations. Removing the ring-fence can only reinforce ESB's dominance and hinder competition..

The SEM-C and its consultants have previously concluded that ring-fencing is important for maintaining liquidity and protecting consumers' interests. Any proposal to remove the ring-fence would have to demonstrate either that changes in market conditions since their earlier work in 2010-12 had overturned the original case for ring-fencing, or that removing the ring-fence was necessary to achieve certain benefits that were not considered in 2010-12. The Consultation provides no such justification for removing the ring-fencing of ESB-Generation and EI.

Summary

We find that the policy options set forth in this consultation document are poorly-developed and focus on the symptom (illiquidity) of a problem rather than the problem itself (market power). As we have indicated throughout the report, the SEM-C should instead target policy interventions in forward markets in way that improves the competitive structure of wholesale and retail markets in the I-SEM, by providing a level playing field in suppliers' access to hedging.

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