

Submission to MCE consultation on the separation of electricity generation and transmission

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1 Introduction

The question of whether there should be unbundling of generation and transmission activities has had a great deal of attention in Australia. The Consultation RIS represents the culmination of this debate. It formulates some implementable options and, for the first time, seeks to use cost-benefit analysis to compare the options. This submission discusses some of the questions raised in the Consultation RIS and also suggests some additional complementary reforms that may assist to give practical effect to the objectives.

2 Context

The Australian Competition and Consumer Commission (ACCC) has advocated special energy cross-ownership rules on several occasions (ACCC 2004; 2005). The Productivity Commission (PC) considered the question in 2005 and recommended further investigation (PC 2005). The Energy Reform Implementation Group (ERIG) further examined it in 2006 and recommended prohibiting transmission/generation mergers as soon as possible (ERIG 2007 p.11). In the same year the Council of Australian Governments (COAG) endorsed 'the ongoing structural separation of the

¹ The views expressed in this submission are the personal views of the author and are not the views of his employer, the Essential Services Commission of Victoria.

competitive generation and retailing activities from the natural monopoly transmission functions in the National Energy Market' (COAG February 2006). It directed the Ministerial Council on Energy (MCE) to develop specific recommendations to maintain separation of generation and transmission in a way that complements s.50 of the *Competition and Consumer Act 2010* (CCA).

Cross-ownership rules remain in place in Victoria, but in practical terms they are subsidiary to the general provisions in the CCA. There was a consultation in 2005 on whether they should be repealed (Department of Infrastructure 2005) but no action was taken pending Federal developments. The Victorian Department of Primary Industry (DPI) has recently indicated it intends to repeal these laws as part of a wider legislation review associated with the introduction of the National Energy Customer Framework (DPI 2011 p.8).

The Consultation RIS observes that there is very little cross-ownership at present and the issues being considered are forward looking.

3 The competition issues

The main issues being considered are:

- the adequacy of s.50 of the CCA to protect competition in the event of new cross-ownership between electricity transmission and generation activities
- whether additional measures are needed to complement s.50, or to improve the access regulation regime, to better protect competition in the electricity industry
- whether cross-ownership constraints should apply to generation and transmission assets and operations.

The Consultation RIS presents most of the arguments why transmission-generation cross-ownership may lessen competition. These include: the risks of anti-competitive discrimination with respect to service quality (through operational, maintenance and investment decisions); potential for cost shifting from contestable to regulated activities; and the ability to obtain competitive advantage through access to commercially sensitive information of competitors (Frontier Economics 2004). It is suggested that some of these activities may be difficult to detect or monitor. Furthermore, the Parer Review in 2002 argued there are special risks to the effectiveness of competition in the generation market because the electricity pool is susceptible to manipulation:

The ability of generators to exercise market power in a costly way at particular times should be explicitly recognised. More competition is needed than would be normally required in other industries to address this concern. (Parer 2002 p.21)

The debate has not given the same emphasis to separation between competitive electricity retail and distribution businesses. However, in some respects the issues are similar. ERIG noted that there was little or no cross-ownership between retail and distribution activities (ERIG 2007 p.129), but as shown by the Consultation RIS, generation and transmission are similarly separated.

Electricity transmission and distribution infrastructure in Australia is subject to a third party access regime, which includes ring fencing requirements for vertically integrated businesses. Proponents of cross-ownership rules have argued that ring fencing is not fully effective where there is generation-transmission cross-ownership. However, there are weaker and stronger forms of ring fencing. A somewhat different argument

is that, to effectively prevent discrimination and the other misuses of market power mentioned, regulation would need to be particularly intrusive and burdensome (Ehlers 2010 p.4). This view is consistent with the Hilmer report, which advocated unbundling as an alternative to 'the more intensive conduct regulation' (Hilmer 1993 p.266). Quite rightly, the Consultation RIS canvasses an enhanced ring fencing option (although the merits of the specific option are discussed below).

The Consultation RIS suggests that 'strengthened behavioural regimes (tighter ring-fencing and disclosure requirements for example)' have not been found sufficient to curb market power in some overseas jurisdictions (MCE 2011 p.5). However, Australia is starting from a situation in which the industry is largely unbundled, so such overseas examples may not be pertinent. The same would apply to Hilmer's view. The question is whether, *incrementally*, tighter ring fencing is to be preferred to co-ownership prohibition.

The Consultation RIS focuses on the balance between the benefits of unbundling associated with preventing anti-competitive behaviour and the possible costs of businesses not achieving efficient scale or scope. Another potential cost is the risk that efficient investments may be discouraged.

For example, there may be efficiency benefits to co-ownership of generation and transmission for newly constructed facilities beyond the existing grid. The generation investor may prefer to own the transmission line that connects its plant to the grid. Separate ownership may expose it to the risk of future 'hold up' if there are limitations on the ability to write complete contracts and/or uncertainty about the effectiveness of regulation. These investment projects may be more difficult to carry out if the new transmission and generation facilities must be owned by different parties.

4 Overseas experience

Most historical experience with mandatory unbundling has been in markets that were vertically integrated. The experience, and the costs and benefits, are not necessarily applicable to cross-ownership prohibitions imposed in a situation where the market has little vertical integration. But it is useful to briefly outline some examples nonetheless.

The New Zealand government imposed mandatory network unbundling in 1998. At that time networks were not price regulated, but this was introduced in 2001. The cross-ownership rules were relaxed, particularly in regard to ownership of renewable energy generation assets by network businesses, and limited amounts of distributed generation. This was softened further in 2004, allowing unlimited renewable generation capacity and up to 50 MW or 20 per cent of line capacity (subject to ring fencing). In 2007 it was again modified to include hydroelectric generation in the 'renewable' category and allowing networks to own unlimited generation not collocated with its network (Nillesen 2008).

In Nillesen and Pollitt's analysis, network unbundling in New Zealand had unforeseen and irreversible negative effects on competition and large one-off restructuring costs. Although network quality of service improved, customers did not benefit. They warn that 'policy makers should take care when proposing structural remedies to solve market malfunctioning' (Nillesen 2008 p.57).

Prior to 2007, the European Union imposed a requirement on its members that vertically integrated electricity transmission/distribution businesses should be ring fenced from generation and retail businesses. They should be separate and functionally independent legal entities. Management of network businesses should not to participate in the day-to-day operation of

business units carrying on other activities. During this period some countries went further and fully unbundled the networks.

In 2007 the European Union strengthened its position, requiring full ownership separation of energy infrastructure from contestable activities. Independent System Operators (ISOs) would be established to operate, maintain, and plan the transmission networks and manage all capacity augmentation projects. Again, some countries progressed further than others.

However, subsequently, in 2009, a modified energy policy was introduced in which the ISO model became something of a substitute for unbundling (Datamonitor 2009). Vertically integrated companies could retain a controlling ownership interest in network assets if the network were managed by an ISO. Thus it became more like a ring fencing arrangement except that, while the ISO could be a controlled entity, it could not be a wholly owned subsidiary.

The move toward stronger unbundling requirements in 2007 appears to have been motivated by the aim of creating effectively competitive electricity and gas wholesale markets in Europe. Newbery has supported this aim:

... ownership unbundling of transmission from generation helps to support a competitive wholesale market, which in turn puts pressure on companies to reduce costs. (Newbery 2004 p.23)

Some studies of the costs and benefits of electricity transmission or distribution unbundling found that there was no clear welfare improvement (Ehlers 2010 p.12). Pollitt finds that the best theoretical and empirical evidence supports ownership unbundling, and:

... ownership unbundling of transmission is a key part of energy market reform in the most successful jurisdictions. (Pollitt 2007 p.1)

According to NERA, the incentives to invest in non-renewable generation and transmission remain areas that have been given relatively less attention in Europe to-date (Shuttleworth 2008):

The EC wants to overcome the disincentive to invest in transmission, but there is immense confusion about investment incentives in Europe. (Shuttleworth 2008 p.8)

This discussion suggests the following observations:

- the case for maintaining vertical separation of electricity networks is sound
- the unbundling policies of New Zealand and Europe are far from being ridged, pure or complete
- compromises in the degree to which co-ownership is restricted have reflected concerns with practical issues such as the adequacy of investment incentives, security of supply, and bargaining power against primary energy producers
- there are risks of unforeseen consequences in adopting structural constraints that are stronger than the minimum needed to achieve the given policy objective
- the effects of reforms on the incentives to invest in generation and transmission capacity are still not well understood.

5 Adequacy of s.50

Since in the Australian market there is little co-ownership of generation and transmission assets, such co-ownership can come about either through:

- (a) a business that owns generators acquiring a transmission business or assets (or vice versa)
- (b) a business that owns generators constructing new transmission assets (or vice versa) or
- (c) a business jointly constructing generation and transmission assets.

The effects on competition of (b) or (c) will often be quite different to those of (a). In U.S. antitrust practice, ventures that add to the productive capacity of a market are usually considered less likely to be anti-competitive. Prohibition of cross-ownership that prevented (b) and (c) may discourage efficient investments, diminish supply security and/or impede the development of competition.

Thus while the Consultation RIS observes that ‘the CCA cannot prevent co-ownership as a result of a TNSP building a generator (or vice versa)’ (MCE 2011 p.5), these circumstances would not normally give rise to concerns about substantial lessening of competition because they add to production capacity in the industry. This supports the view that it is sufficient to concentrate on (a) and assess the competitive effects of mergers or other asset acquisitions on a case-by-case basis — which is what s.50 does.

The Consultation RIS notes several sources that suggest s.50 should be adequate to deal with energy sector mergers, including generation-transmission. On the other hand, the ACCC has been concerned about the difficulty of merger assessment and successful prosecution in the energy industry following its unsuccessful outcome in *AGL v ACCC* (2003). However, the ACCC has since assessed several electricity industry mergers without any obvious difficulty (see: ACCC 2006; 2007).

The *AGL v ACCC* (2003) case is not a good guide to generation-transmission mergers because it was about integration between generation and retail. While such mergers can affect competition, anticompetitive effects are unlikely if neither the retailer nor the generator held market power prior to the merger (Acacia CRE 2006 p.6; ACCC 2008b p.28). Similarly, Joskow has observed:

Vertical integration between retail supply and generation is likely to be an efficient response to imperfections in wholesale markets. ... However, if there is significant market power in either in the upstream or downstream markets, vertical integration could lead to a further reduction in competition by increasing the operating or entry costs of rival retail suppliers (Joskow 2008 p.35).

Hence, a lessening of competition will only occur in certain circumstances in this kind of merger. The ACCC's difficulties in that case do not imply similar difficulties in enforcing merger law in generation-transmission mergers.

There are insufficient grounds to claim that s.50 would be ineffective in restricting anti-competitive generator-transmission mergers. That said, one possible means of enhancing the effectiveness of s.50 to deal with generation-transmission mergers is by adopting a more comprehensive approval process. For example, in Europe, if specific complexities arise in relation to a merger, the European Commission (EC) can open up an in-depth 'second phase' inquiry.

The ACCC has two merger clearance processes, informal and formal, each with a separate guideline – although the ACCC intends to combine these into one guideline (ACCC 2008a p.4). The informal clearance process does not have a statutory basis and is simply an indication from the ACCC as to

whether it will take legal action or not. The formal merger clearance process is a voluntary process that merger parties can use. The Dawson inquiry recommended this formal voluntary process, in part to impose greater discipline over the ACCC's management of its informal process (Dawson 2003 p.61).

The informal process has many advantages over the formal process for merger proponents. So much so, that the formal process has not been used to-date. The formal process differs from the informal process in that:

- It is a more public process with a fixed 40-day timeframe subject to options for extensions.
- The burden of proof is different. The ACCC cannot grant clearance unless it is satisfied that the merger is consistent with s.50 and the onus is on the parties to demonstrate this with sufficient confidence.
- The ACCC's decision is subject to merits review by the Australian Competition Tribunal, but only at the instigation of the applicant.
- The decision is binding on the merger parties (unless successfully appealed). In the informal process, the ACCC must take legal action in the Federal Court if parties do not comply with its decision.

The formal process is more transparent than the informal process and it is open to the public to make submissions. The merger proposal, and the ACCC's analysis and reasoning, and any expert reports considered, would be exposed to greater scrutiny through this process.

The formal clearance process may better address public interest issues, and these are relatively important in the energy industry. By altering the burden of proof it would strengthen the ACCC's ability to ensure that mergers that substantially lessen competition are prevented.

The MCE should consider the option of making the formal merger clearance process mandatory for all generation-transmission mergers.

If the formal merger clearance process were to be mandatory for generation-transmission (or other energy sector mergers), it may need to be accompanied by a compulsory notification regime for those mergers (subject to thresholds).

A simple way of giving effect to these two requirements would be to impose an obligation under the National Electricity Rules (NER) or National Electricity Law (NEL) that an authorised generator business proposing to acquire an interest in an authorised transmission business, or vice versa, must, prior to completing the transaction:

- notify the ACCC and
- apply for the formal clearance process.

It should also be noted that Parer recommended the ACCC include energy specific criteria in its Merger Guidelines (Parer 2002 p.119) and the PC also suggested the merger guidelines could provide more appropriate screening principles for electricity mergers (PC 2005 p.190). These recommendations have yet to be addressed by the ACCC. In the USA, the Federal Energy Regulatory Commission (FERC) has issued an analytic screen to provide merger parties with a standard analytic method and data requirements, to allow it to quickly determine whether a proposed merger presents market power concerns. (FERC 1996)

This section has proposed that the NER or NEL be modified to impose compulsory notification and application of the ACCC's formal clearance process for all generation-transmission mergers.

6 Ring fencing

The Consultation RIS' Option B would restrict transmission businesses to owning only small interests in other businesses, such that those other activities contribute less than five per cent of its total revenue. This option would be implemented through the ring-fencing rules, but only as a tool for imposing the co-ownership constraint.

Cross-ownership rules are discussed in section 6. This section discusses the regulatory ring fencing arrangements in the energy industry and compares them against some other access regimes to consider whether they are adequate.

For mergers between businesses in the natural monopoly and competitive parts of the industry, an important issue is the effectiveness of the access regime. Both the PC and ERIG suggested that access regimes may not be fully effective in preventing a vertically integrated transmission business from favouring its own generation facilities over those of a competitor.

Ring fencing serves two purposes. One is the separation of costs of regulated and non-regulated services to ensure that the charges for regulated bottleneck services do not incorporate costs of non-regulated activities. This objective is largely served by the accounting separation of regulated and other activities, and cost allocation rules. The second goal is to ensure that the users of regulated bottleneck services are treated fairly and equally, and the access provider's own activities in upstream or downstream markets are not unfairly advantaged. This objective requires separation of the business units and personnel responsible for the regulated services from those carrying out other activities and rules, processes and systems to ensure that these business units carry out their activities at arm's length from one another. It also requires procedures and systems to limit

information flows and protect confidential information relating to competitors.

A separation arrangement of this kind is costly to implement with significant ongoing compliance costs.

The elements of the electricity transmission ring fencing regime include:

- a) legal separation of the entity providing access from entities carrying on any other business (which may still be owned by the same parent)
- b) a transmission access provider 'must not make decisions or act in a manner that discriminates in favour of an associate in relation to the terms or conditions on which those services are provided'
- c) separate accounts for regulated and other services and rules for allocating costs between them
- d) limitations on the flow of information between the entity providing access and any other person, including its affiliated businesses
- e) separation of marketing staff
- f) scope for the AER to add to or to waive an obligation. ('National Electricity Rules Version 45' 2011 pp.709-10);(AER 2002)

These requirements are quite limited. Legal separation is unlikely to prevent or discourage affiliated companies from collaborating (Queensland Competition Authority 1999 pp.9-11). It does not require them to be operationally separate. The ring fencing of information flows is difficult to monitor. And, aside from marketing staff, common staffing is not prevented.

The Victorian rail access regime provides an example of more thoroughgoing ring fencing requirements. They include the following additional requirements:

- establishing functionally, physically and organisationally separate business units with separate secured work areas
- ensuring that these separate business units have separate staff (documented in a staff registry)
- implementing information technology access controls and protocols for managing access seeker confidential information which support compliance with strict statutory requirements relating to information flows and are auditable
- protocols for ensuring that all dealings between the affiliated ring fenced businesses are at arms length
- rules governing the circumstances and methods to be used by the access business when outsourcing functions to ensure that affiliated businesses are not advantaged and all dealings are at arms length
- the protocols and systems must be approved by the regulator and the separation requirements are auditable at the regulator's discretion
- copies of contracts the access business has with affiliated businesses must be provided to the regulator
- businesses must also self-monitor their compliance and report any breaches as well as activities to ensure compliance. (Essential Services Commission 2006)

The MCE should give consideration to whether the transmission ring fencing rules are as thorough and effective as they could be. This may also be relevant to other parts of the energy industry. For example, a recent consultation by the Australian Energy Markets Commission (AEMC) into the effectiveness of energy retail competition in a market with vertical integration highlighted that stakeholders considered ring fencing to be ‘an issue that should be considered in the context of promoting competition’ (AEMC 2011 p.20-22).

A further option for the MCE to consider in its consultation on the separation of generation and transmission is enhanced ring fencing rules to ensure more thorough separation requirements. In those situations where electricity generation businesses invest in transmission assets, or vice versa, or in circumstances where generation-transmission mergers were found not to lessen competition, stronger ring fencing rules would provide additional safeguards to ensure that anti-competitive conduct is unlikely to emerge.

This section has proposed that the transmission ring fencing rules be strengthened. This measure would be complementary to the proposals for strengthening of the merger assessment process in section 4. Taken together, these proposals provide an alternative option to the imposition of cross-ownership constraints.

7 Cross-ownership rules

The Consultation RIS presents two alternative options for imposing cross-ownership constraints.

Option B would be imposed via the ring fencing rules and would limit the ownership of non-transmission businesses by the owners of transmission

assets. Specifically, non-transmission activities could not amount more than five per cent of the transmission business' revenue. This option appears to be extreme, because at the present time two major owners of transmission networks are also owners of distribution networks. Businesses like this may be in violation of the cross-ownership rule even though they may have no generation interests. No arguments have been presented in any of the consultations to-date suggesting co-ownership of transmission and distribution assets raises competition concerns.

Option B appears to be poorly designed and would rely heavily on exemptions administered at the discretion of the AER to achieve reasonable outcomes. However, this discretionary role of the AER would impose unnecessary regulatory risk and micromanagement.

Option C is an explicit prohibition on generation-transmission co-ownership, subject to certain thresholds and exemptions. This option is better designed than Option B because it limits only the types of cross-ownership that it intends to.

The Consultation RIS is correct to note that the exemption thresholds may introduce significant risk. It is well recognised that partial acquisitions can create competition concerns even without a controlling interest. The economic incentives of the businesses may be significantly altered, and even a shareholding of 10 per cent may be sufficient to facilitate flow of commercially sensitive information between the businesses (in the absence of rigorous ring fencing and statutory protections on information). In this respect Option C may be weaker than s.50 of the CCA, which has no minimum threshold. Antitrust authorities in the USA and Europe have taken action on minority acquisitions in a number of cases in recent years. (See: OECD 2008; 2009)

There are a range of matters that may potentially give rise to exemptions. For example, whether the generation is scheduled, semi-scheduled or non-scheduled; and whether the transmission and generation facilities are located in different regions (MCE 2011 p.47). The broad-based prohibition of cross-ownership may not preclude the need to assess merger proposals on a case-by-case basis.

If this were to be the case then, administratively, the 'rule of reason' inquiry of s.50, which considers whether prohibition should be imposed on a case-by-case basis, would appear to be the clearer and sounder process.

An important issue for consideration is whether the alternative option put forward in this submission would be sufficient to achieve the objectives. If so, then Option B or C would not represent the proportionate regulatory response.

8 Conclusion

Option A (no change) depends on the assertion that the probability of co-ownership of generation and transmission businesses will be low. We can't assess that probability, but the energy market may be subject to significant change as it adjusts to the carbon tax, the development of LNG markets for eastern seaboard natural gas, and other factors. As Parer emphasised, the electricity wholesale market is likely to be susceptible to manipulation, and therefore adequate measures should be adopted to protect competition. Option A may be inadequate to meet this requirement.

Option C is to be preferred to Option B. The latter is poorly designed because it appears to prohibit a wide range of co-ownership arrangements that have never been the subject of public consultation. Mitigating this

problem through waivers and exemptions would involve unnecessary regulatory risk and micromanagement.

An alternative option has been developed in this submission involving:

- Strengthening the s.50 merger assessment process by requiring the relevant energy businesses to:
 - notify the ACCC of a proposed acquisition (subject to a materiality threshold, such as five per cent)
 - apply for the formal merger clearance process, which is a public process and imposes a burden of proof on the applicant.
- Strengthening the ring fencing framework so as to impose a robust separation arrangement between any co-owned transmission and distribution businesses.

The costs and benefits of this alternative option would need to be considered against Option C. In addition to other matters identified in the Consultation RIS, this assessment should have regard to:

- the likely effects of the different options on investment in transmission and generation facilities in the NEM and on the security of supply
- the principles of good regulation, including (among others): a proportionate regulatory response; balancing risks and costs; and not unduly trespassing on 'personal rights and liberties'.

I submit that the alternative option presented here should be included in the MCE's considerations.

9 References

Acacia CRE 2006, 'The Effectiveness of the Trade Practices Act to Guide Mergers in the Australian Energy Market (prepared for ERIG)'.

ACCC 2004, 'Submission to the Productivity Commission Review of National Competition Policy Arrangements'.

ACCC 2005, 'Cross-ownership Rules for the Energy Sector: Submission to the Victorian Department of Infrastructure'.

ACCC 2006, 'Statement of Issues – International Power's proposed acquisition of the South Australian assets of NRG'.

ACCC 2007, 'Public Competition Assessment: AGL Energy Limited and TRUenergy Pty Ltd – proposed swap of South Australian electricity generation assets'.

ACCC 2008a, 'Formal merger review process guidelines'.

ACCC 2008b, 'Merger Guidelines'.

AEMC 2011, 'Stage 2 Final Report: Review of the effectiveness of competition in the electricity retail market in the ACT'.

AER 2002, 'Transmission Ring-Fencing Guidelines'.

COAG February 2006, 'National Competition Policy Review, Attachment B'.

Datamonitor 2009, 'End Game: What Now for Europe's Energy Markets?'.

Dawson 2003, 'Review of the Competition Provisions of the Trade Practices Act'.

Department of Infrastructure 2005, 'Cross-ownership Rules for the Energy Sector: Issues Paper'.

DPI 2011, 'Discussion Paper: Victoria-Specific Regulatory Requirements under the National Energy Customer Framework'.

Ehlers, E. 2010, *Electricity and Gas Supply Network Unbundling in Germany, Great Britain and The Netherlands and the Law of the European Union: A Comparison*, intersentia.

ERIG 2007, 'Energy Reform: The way forward for Australia, a report to the Council of Australian Governments'.

Essential Services Commission 2006, 'Victorian Rail Access Regime: Ring Fencing Rules', Victorian Government Gazette, pp. 13-25.

FERC 1996, 'Inquiry Concerning the Commission's Merger Policy Under the Federal Power Act: Policy Statement, Appendices B and C.', in *The Energy Journal*.

Frontier Economics 2004, 'Assessing generation-transmission mergers in the NEM (report prepared for the ACCC)'.

Hilmer, F., Rayner, M. & Taperell G. 1993, 'National Competition Policy: Report by the Independent Committee of Inquiry'.

Joskow, P. 2008, 'Lessons Learned from Electricity Market Liberalisation', *The Energy Journal*, no. Special Issue: The Future of Energy: Papers in Honor of David Newbery.

MCE 2011, 'Consultation Regulation Impact Statement: Separation of generation and transmission'.

'National Electricity Rules Version 45', 2011.

Newbery, D. 2004, 'Electricity Liberalisation in Britain: the quest for a satisfactory wholesale market design', in *Cambridge Working Papers in Economics*.

Nillesen, P. & Pollitt, M. 2008, 'Ownership unbundling in electricity distribution: empirical evidence from New Zealand', in *Cambridge Working Paper in Economics*.

OECD 2008, 'Antitrust Issues Involving Minority Shareholding and Interlocking Directorates: United States'.

OECD 2009, 'Anti-trust issues involving Minority shareholding and Interlocking directorates'.

Parer 2002, 'Towards a Truly National and Efficient Energy Market'.

PC 2005, 'Review of National Competition Policy Reforms: Inquiry Report'.

Pollitt, M. 2007, 'The arguments for and against ownership unbundling of energy transmission networks', in *Cambridge Working Paper in Economics*.

Queensland Competition Authority 1999, 'Electricity Distribution Ring-Fencing Guidelines: Draft for comment'.

Shuttleworth, G. 2008, 'Three Measures to Help Ownership Unbundling Achieve its Goals', *NERA Energy Regulation Insights*, no. 35.