MERGER BONDS: A NEW REMEDY FOR AN OLD PROBLEM

Brandon Schaufele,
Associate Professor, Business, Economics and Public Policy
Director, Ivey Energy Policy and Management Centre
Ivey Business School, Western University

Merger control is beset with uncertainty. Mergers promise to unlock potential economic efficiencies yet introduce the prospect that the newly merged firms may behave anti-competitively. Denying a merger for which efficiencies outweigh anti-competitive harm forgoes socially beneficial combinations. The opposite is equally true: approving a merger that yields few efficiencies but leads to anti-competitive conduct harms consumers. Competition authorities, as regulators, must weigh the probabilities of these future outcomes, potential efficiencies versus potential anti-competitive conduct, when making an ex-ante decision whether to challenge a transaction. That is, they must take a decision before the uncertainty is resolved. This paper introduces a novel behavioural remedy, referred to as a merger bond, that may help alleviate and transfer some of the risks arising from ex-ante merger control. Merger bonds are financial contracts that act as assurances against anti-competitive conduct, bridging the gap between ex-ante and ex-post merger review. They offer several advantages that complement existing merger control remedies.

Le contrôle des fusions est soumis à l'incertitude. Les fusions promettent de réaliser des gains en efficience économiques, mais laissent entrevoir la possibilité que les entreprises nouvellement fusionnées se comportent de manière anticoncurrentielle. Le refus d'une fusion pour laquelle les gains en efficience l'emportent sur tout préjudice anticoncurrentiel mine les combinaisons bénéfiques pour la société. Le contraire est également vrai : l'approbation d'une fusion qui produit peu de gains en efficience et qui engendre une conduite anticoncurrentielle nuit aux consommateurs. Les autorités en matière de concurrence, en tant qu'organismes de réglementation, doivent évaluer les probabilités de ces résultats, soit les gains potentiels en efficience par rapport aux comportements anticoncurrentiels potentiels, lorsqu'elles prennent la décision ex ante de contester une transaction. C'est-à-dire qu'elles doivent prendre une décision avant que l'incertitude ne se résorbe. Cet article présente un code de conduite novateur, appelé une obligation de fusion, qui peut aider à atténuer et à transférer certains des risques découlant du contrôle ex ante des fusions. Les obligations de fusion sont des contrats financiers qui servent d'assurances contre la conduite anticoncurrentielle, ce qui permet de combler l'écart entre l'examen ex ante et l'examen ex post des fusions. Elles offrent plusieurs avantages qui complètent les recours existants en matière de contrôle des fusions.

Uncertainty is a defining characteristic of merger control. Consider, for example, a typical notifiable merger. Before contacting the Bureau about a proposed transaction, the merging parties must be prepared to argue that little harm to consumers will ensue from the merger. They may claim that prices will remain flat, quality will improve, and new innovations will be introduced to the market.[1] Companies also often claim that they will exploit synergies and achieve efficiencies, facilitating lower costs per unit output. Competition authorities might offer a different perspective: efficiencies, the merger opponents argue, are often unrealized but prices are likely to rise and quality to deteriorate. Of course, because merger review is ex-ante, neither side has certainty about which outcomes will be realized. That is, when the merger is proposed, neither efficiencies nor anti-competitive harms are observed.[2] They are uncertain. Efficiencies and anti-competitive effects materialize in the future and are fundamentally unknown when the Bureau must take a decision to challenge the transaction.[3] The best the Bureau can do is formulate a prediction about prospective effects. Uncertainty is only resolved later, sometimes years later.

The uncertainty of merger control is a consequence of having to make a prospective assessment under the merger control procedures adopted within the Canadian legal framework—i.e., the *Competition Act* (the "*Act*").[4,5] Because the process of Canadian merger review is ex-ante, the Bureau engages in complex analysis to forecast the magnitude of prospective harms and benefits.[6] If the Bureau underestimates the anti-competitive harm of a merger, or overgenerously credits merger-related efficiencies claimed by the parties, it may be too lenient and fail to challenge a merger that harms Canadian consumers. If the Bureau incorrectly recognizes few efficiencies, it may be too strict. It will then deprive the Canadian economy of productivity-enhancing opportunities. This risk of excessive restrictiveness or unwarranted leniency is mirrored in the oft-discussed trade-off between Type I errors, challenging mergers that are not anti-competitive, and Type II errors, permitting transactions that harm competition.[7] Both choices—being too lenient or too strict—involve formulating estimates of consumer harm and efficiencies. Both also involve risk. And, critically, this risk is not socially neutral with respect to producers and consumers.[8]

The risk of over- and underenforcement arises because the Bureau must predict merger effects that are inherently uncertain prior to observing post-merger market outcomes. Any prediction inevitably comes with errors. The Bureau will get it wrong some of the time. Indeed, the Bureau may be prone to both idiosyncratic errors, where the facts or context around a specific case lead to the wrong decision, and systematic errors, where the Bureau

is systematically biased towards a particular outcome. However, under current procedures, the Canadian merger review process assigns the bulk of the risk of errors to consumers, rather than the merging firms. To state differently, because the Bureau acts before any anti-competitive effects can be observed, consumers, rather than firms, bear most of the risk of incorrect prediction.[9] If Canadians are risk averse, as they surely are, this makes them worse off.[10]

It need not be this way. New remedies, or regulatory tools, can be introduced into merger control that reassign at least a share of these risks. This note proposes one such procedure, one that relies on financial instruments, a bond, to transfer some of the risk from consumers to the merging parties. I call this proposal a "merger bond".[11] A merger bond is simply a financial contract, specifically a surety. It is a surety held under terms negotiated between the Bureau and the merging parties.[12] For example, a merger bond, might be a financial assurance made on behalf of the merging parties, before the merger is consummated, for a pre-defined period, to not engage in anti-competitive conduct, such as, say, increasing prices. If the conditions defined in the contract underlying the bond are satisfied (e.g., the merged firms did not engage in anti-competitive price increases), all funds associated with the bond are returned to the merging parties. If the covenants in the underlying bond agreement are violated, the merging parties forfeit the financial value of the bond (i.e., they lose the assurance). Merger bonds are behavioural remedies with a twist. By delaying decisions in response to uncertainty, they have the potential to act as an additional regulatory instrument in a competition enforcer's toolbox, one that bridges the longstanding trade-off between ex-ante and ex-post merger enforcement.[13]

In what follows, I outline the idea of a merger bond. This note is intended to spark discussion and contribute to Canada's renewed interest in competition policy.[14] Immediate motivation arises from Innovation, Science and Development (ISED) Canada's recent consultation on the Canadian *Competition Act*. As ISED's *The Future of Competition Policy in Canada* states "the nature of competition … is changing as firms increasingly compete for consumers in dynamic ways and on features other than prices, challenging some of the traditional methods of analysis".[15] Exploring flexible and novel remedies offers new, sector-neutral avenues to improve welfare, and may help enforcement agencies better address "potentially harmful mergers that currently escape … remedy".[16] However, the idea of a merger bond extends beyond merits of specific legislative updates to a more general competition policy application. To this end, I include an Appendix with technical details. This Appendix sketches a mathematical framework that

can be used to assess how specific economic parameters factor into pricing a merger bond.[17]

Merger bonds are a method to share the risks of mergers and delay uncertain decisions through the creation of a financial instrument. By financially securitizing some of the risks from merger approval, it can be shifted from consumers to the merging parties. Instead of having the Bureau perform once-and-for-all ex-ante merger review, a merger bond requires merger proponents to post financial assurance, a bond. After the bond is posted, the Bureau allows the merger to proceed. Then, following some pre-determined period, say, for instance, seven years, the Bureau evaluates the post-merger outcomes. If the merging parties avoided anti-competitive behaviour, the principal of the bond is returned to the merged firm. If the newly merged firm did however engage in anti- competitive conduct, it forfeits the bond. The funds will be given to Canadians as compensation or directed appropriately as established in statute.[18]

The idea of a merger bond is meant to be provocative.[19] Requiring pre-merger financial assurance is a radical idea given current merger control regulation. Still, consider the following supplemental merger review procedure. First, merger proponents notify the Bureau that they intend to merge, exactly as now. Next, while the Bureau is conducting its analysis of the likely competitive effects of the merger, the Bureau and the companies enter into negotiations on a review agreement. (The term "review agreement" is used to distinguish it from existing notions of consent agreements.) A review agreement is a contract stipulating the value of the surety and the terms of an ex-post merger evaluation. If an agreement is reached, the merger is approved and the merging parties post funds (or assurances) with a third-party agency. If an agreement cannot be reached, the standard merger review proceeds as normal. In this scenario, merger bonds can be viewed as a tweak or add-on to existing procedures, not a full-fledged reformation of practice. Merger bonds are merely another tool, a new remedy that bolsters the existing review process. They do not eliminate existing procedures.[20]

Merger bonds would likely be most useful for mergers between large, established firms. Mature, stable industries with meaningfully-sized competitors and well-defined product markets lend themselves well to ex-post evaluation and, hence, merger bonds. Because of the many unknowns, merger bonds are likely less suited for addressing the issue of dominant incumbents pre-emptively purchasing nascent competitors, companies that might grow into formidable challengers.

The central feature of merger bonds is the ability of the Bureau to delay a decision under considerable uncertainty regarding the effects of the merger until better information is available.[21] Therein, it presents an opportunity to shift some of the risks of merger control from consumers to the merging parties. Colloquially, merger bonds require firms to put money where their mouth is. If companies are hesitant or unwilling to post a bond, Canadians should be wary of any claims made by the merging parties regarding the effects of the merger. The companies' assertions about increased competition and lower prices may not be credible, and claimed efficiencies may not be realizable.[22]

There are other advantages to merger bonds beyond the primary benefit of the risk transfer. These include:

- The proposed procedure requires ex-post evaluation of the merger at a point in time when better information about market outcomes is available. Among other things, such ex-post merger review can uncover insights that can be applied to future mergers.

- In circumstances in which merging parties must raise capital to post a merger bond, capital markets may reveal information about the perceived risk of these merger bonds—and the likelihood of perceived anti-competitive effects of the merger.

- Financial assurance could potentially help address liability gaps in existing Canadian competition legislation.[23] (A liability gap refers to the limits on private parties' ability to seek civil remedies under the *Act*.)

- Merger bonds supply incentives for specific deterrence.

- The bond principal can be used to compensate consumers in the event anti- competitive behaviour is detected.

Merger bonds work by delaying decisions until better information is available. To be clear, ex-post merger review is still expected to be contentious. But because firm conduct will have actually occurred, the dispute will be based on observed market conduct rather than a but-for estimate of future conduct. This can be especially valuable when there are concerns over non-price merger effects such as reduced product quality and weaker innovation incentives. These are precisely the hard-to-predict effects highlighted by Chiasson and Johnson.[24] The prospects of deprecated quality and weaker research and development efforts are particularly challenging to

assess ex-ante. They will also be hard to measure ex-post, but substantially less so. More generally, better information can only improve merger assessment. Instead of engaging in hard-to-resolve issues about uncertain future harms, parties can evaluate actual outcomes after a pre-defined period.

The notion of ex-post merger review has been advocated in recent comments on the future of the *Competition Act*. For instance, the Public Interest Advocacy Centre (PIAC) argues that Canada should "[m]andate ex-post merger reviews to be undertaken after a period of at least five to ten years from merger approvals, particularly for those mergers that carried significant risk of market concentration. The results of such reviews should be publicly disclosed."[25] Likewise, the Bureau seeks to extend its ability to conduct market studies, claiming that "[m]arket studies can play a role in assessing the impacts of enforcement action."[26]

The presumptive value of ex-post merger review, as recommended by PIAC, is learning. Ex-post merger review acts as a scorecard. It offers an after-the-fact evaluation of whether claimed merger-related efficiencies and/or the anticipated consumer harms materialized. Any learnings can then inform future enforcement action.[27] Indeed, ISED suggests empowering the Bureau to conduct additional merger retrospectives "as a means of refining analytical approaches and applying lessons learned".[28]

Yet, ex-post merger review can take on many forms and, indeed, competition authorities in other countries use ex-post reviews to study remedies or evaluate mergers ex-post. However, if ex-post merger review is useful for understanding the effects of mergers, the obvious questions is: why not make it determinative? Ex-post merger review could actively inform existing decision-making. Canada could make all notifiable mergers ex-post reviewable, while also, in situations where a review agreement is successfully negotiated, transferring the risks of consumer harms from anti-competitive conduct to the merging firms through a merger bond. Financial assurance is a regulatory instrument that makes this feasible. The proposed merger review process addresses the inherent uncertainty by delaying it to have better information on the competitive effects of the merger. Option value exists in waiting to make a decision.[29,30]

Another benefit of the merger bond proposal is that it leverages capital markets. Many firms will need to raise market capital to complete the merger and to cover the regulatory surety. Providers of capital are experts at estimating risk and will conduct analyses before lending funds. Thus, the Bureau will learn the financial market's estimate of the eventual outcome

of the merger review. Specifically, the financial market's perspective will be reflected in the cost of raising money. A high probability of bond forfeiture will imply a high cost of capital. The reverse is equally true. If raising funds to post the merger bond is easy for the merging parties, then the market is confident that there are realizable efficiencies and a low likelihood of any consumer harm that would require the merged firm to forfeit the merger bond. As described, a core challenge of ex-ante merger review involves prediction and financial market lenders are experts at predicting bond repayment, which builds in a degree of redundancy to the forecasting exercise. Moreover, while there is likely little existing, specific expertise in "pricing" anti-competitive harms, capital markets are likely to develop this expertise quickly.

Merger bonds can also be compared to the application of statutory bonding in other domains of the economy.[31] Statutory bonding is used, as an example, in new mine development[32] and as assurance required under Canada's Pipeline Safety Act (2015).[33] Statutory bonds in these cases are viewed as a substitute and backstop for a private liability regime. In these sectors, like with this proposal, bonds are designed to guard against future risks.

Compared with other jurisdictions, the *Act* provides limited scope for private action on competition issues. [34] Moreover, as Ross (2022) states, there is "near consensus on loosening the reins on private enforcement of the Act."[35] The lack of private actions under the *Act* reflects a liability gap: because the risk of being sued is limited, firms face weak (private) incentives to avoid anti-competitive conduct. Existing barriers to private action include both legal and economic hurdles. Merger bonds can work to fill the liability gaps along both dimensions. Removing legal hurdles, as has been suggested by several commentators, enables private action to act as a substitute for a merger bond. Both private litigation and merger bonds can offer compensation to harmed consumers if firms engage in anti-competitive behaviour post-merger. Moreover, both private action and merger bonds incentivize firms to avoid anti-competitive conduct. If merged firms face the threat of private action, with accompanying damages, they will proactively exercise caution to avoid any anti-competitive conduct.[36] Merger bonds provide identical incentives: firms will forfeit the value of their bond if found to have engaged in anti-competitive conduct.

Yet, even if the *Act* were updated to remove legal barriers to private action, there remain economic justifications for merger bonds. Most notably, firms may be judgement proof. That is, it is difficult to recover damages from

a bankrupt company that harmed competition and consumers. Likewise, incentives for private litigation may be insufficient to warrant entrepreneurial firms to pursue a private action. The risk of failure may be too high or the award if successful may be too small. Posting a bond, therefore, restores these incentives, ensuring that companies exercise sufficient care.

In practice, there are many regulatory, procedural, and legal dimensions of merger bonds that require further development. Any novel instrument needs to reflect the legal, business, and statutory context in which it is employed. Still, evidence on the effectiveness of existing merger remedies is fragmented and inconclusive.[37] Merger control lacks easy solutions. The objective of this note is to inject some creativity into the discussions surrounding the future of Canadian competition policy. Merger bonds can contribute to the suite of methods that move beyond the conventional antitrust toolkit, offering new classes of remedy. Along with proposals such as Ducci's "randomization as antitrust remedy",[38] merger bonds depart from the conventional tools of competition enforcement, while remaining faithful to the conventional spirit of competition policy.

Mergers promise potential economic efficiencies, but also lead to risks for consumers. Denying a merger when efficiencies outweigh any anti-competitive harm forgoes socially beneficial combinations but undoing a harmful merger is exceedingly difficult. The challenge is that the competition authority must make a decision whether to challenge a proposed transaction before the uncertainty about the effects of the transaction is resolved. A financial instrument such as a merger bond can be designed to alleviate some of this risk. As Canada wrestles with the future of its competition law, this is a good opportunity to consider the merits of alternative tools and to consider new approaches and policy instruments like merger bonds.

APPENDIX: THE ECONOMICS OF PRICING MERGER BONDS

A fundamental question with merger bonds is how prices should be set. There are many methods to price risk, but few determine the value of uncertain future anti-competitive harms. For illustrative purposes, I present one method to spark discussion, not to be understood as the ideal methodology. Several other approaches are feasible.

In brief, the intuition is as follows. Through merging, the merging firms are essentially asking consumers, via Canada's merger control framework, to switch from the current state of the world with certainty, say a given service quality, to a state of the world where, *as a consequence of the merger*, future service quality is uncertain. Because the merger obliges consumers to accept new risks, they should be compensated. Risk in this example reflects the *possible* deterioration in service quality. The question is how much compensation would risk-averse consumers require to be indifferent between a certain outcome and the newly created uncertain outcome. The required level of compensation reflects the fair price of a merger bond as consumers should be indifferent between the status quo and accepting the risky outcome plus the compensation.

The level of this compensation can be derived by taking the consumer's certainty equivalent indirect utility function and setting it equal to expected indirect utility at the point of indifference. Taking second-order Taylor approximations of both sides of the indifference condition, rearranging and solving for the certainty equivalent compensation yields a value that can be interpreted as the price of a merger bond.[39] The specific expression proposed for pricing a merger bond depends on six parameters and one negotiated term. Each of the six parameters are, in principle, estimable using observable market data in the pre-merger state of the world. Thus, the formula is straightforward to apply. Moreover, as discussed, the parameters have intuitive interpretations and offer nice properties that support the motivation for merger bonds.

The example I use focuses on a possible deterioration in product or service quality, holding product price and other attributes fixed. That is, the prospective harm to consumers arises because the newly merged firm might cut back on call centres or reduce the number of employees devoted to maintenance (say, for example, leading to more dropped calls on a telecommunications network or delays in addressing customer complaints). Alternatively, they may source lower quality materials, thereby reducing

the durability of the product. Deteriorated quality then trickles through to inferior consumer outcomes, harming consumers.

This expression and its derivation are based on Schlee and Smith (2020)[40] and Smith (2014).[41] The expression I propose to price a merger bond is:

$$\text{Bond Price} = M\left(\frac{1}{4}\pi(s(R-\eta)+\theta)\cdot\left(\frac{Q_1-Q_0}{Q_0}\right)^2\right)$$

where M, π, s, R, η and θ are the six parameters. The baseline level of quality is Q_0 and Q_1 is the threshold or trigger level of future quality with a deterioration in quality implying that $Q_1 < Q_0$. The term $(Q_1 - Q_0) / Q_0$ represents the percent change in quality on which to underwrite the bond. This expression is the negotiated outcome of the review agreement. If quality drops below Q_1, then bond forfeiture is triggered, and the bond principal is used to compensate consumers (or for another purpose as stipulated within the statutory framework).

M represents market size. The formula is written with M representing a single, aggregate market. Other specifications could index this parameter so that it reflects market-by-market measures of size.[42] Several methods can be applied to determine market size and, while the details of determining the value of this parameter are important in any specific application, the essential point is that bond prices increase with market size. As the merger affects a larger market, firms must offer more financial assurance. Larger potential consumer harms require larger bonds.

Next, π is the hedonic price of quality. Most firms sell multi-attribute goods and services. A single price is charged for the bundle of characteristics of which quality represents one of several attributes. The price of the quality attribute—holding all other effects constant—is measured as π. An extensive economic and marketing literature has developed on estimating hedonic prices.[43] As a result, it is straightforward to obtain hedonic prices using pre-merger data. It is equally straightforward to generalize the expression to account for other attributes. Importantly, as with market size, the price of the "quality" attribute is positively related bond price. Those goods for which consumers value quality the most lead to higher required sureties.

The third parameter in the bond pricing formula is s, the budget share of the good in a representative consumer's expenditure bundle. This too is positively related to bond price because merging firms selling more important goods, as measured by the share of household budgets, need to post larger bonds. In other words, if 10% of a household's budget is devoted to the good supplied by the merging firms, the prospect of consumer harm

from anti-competitive conduct is greater than if merely 1% of household expenditures are dedicated to that good. The expenditure budget share encapsulates this.

The parameter R is the coefficient of risk aversion for a representative consumer and is directly related to the motivation for merger bonds. Because consumers are risk averse, there is value in transferring the risk of anti-competitive conduct from consumers to firms. As with hedonic prices, there is a vast literature on measuring risk aversion.[44] In the context of Canadian merger control regulation, guidance on this parameter would typically come from the Treasury Board of Canada.[45] Intuitively, the more risk averse affected consumers are, the more these consumers want to avoid uncertainty, the greater should be the financial assurance.

The final two parameters in the bond pricing expression are η and θ. η is the income elasticity of the good and θ is the price elasticity of the good. Both parameters feature in existing merger evaluation and are readily estimable from market data. Both also have nice interpretations within the bond pricing formula. η enters negatively, which means that goods or services with greater income elasticities post smaller bonds. Necessities tend to have small income elasticities while luxuries have large income elasticities. Because the income elasticity is negatively correlated with bond price, firms that produce luxuries should post smaller financial assurance than firms supplying essentials. This parameter functions as an "equity property" of the bond pricing formula. Holding other parameters constant, society is likely less concerned about anti-competitive conduct in high-end products compared with goods deemed essential. The difference between high-end and essential is measured by the income elasticity of consumption. Finally, θ is the price elasticity of a change in quality. The intuition is that the deadweight loss from anti-competitive conduct increases in the price elasticity, so have a greater influence of the magnitude of the assurance required.

Readers familiar with the economics of taxation will notice a parallel between the bond pricing formula and measures of deadweight loss from a specific tax. In taxation, two common properties are frequently invoked: (1) deadweight losses increase in the square of the tax rate and (2) deadweight losses increase in the magnitude of elasticity. Both the square of the quality change and the price elasticity included in this formula play similar roles in the bond pricing formula.

As stated, there are many formulas that one could derive to price a merger bond. The essential feature of this expression is its simplicity, namely, how

key concepts from the economics of risk can be connected to *ex-ante* merger control. Given this connection, the formula offers a method to think through the information needed to adequately price a bond, but also shows how the potential for anti-competitive effects might harm consumers. Uncertainty has a cost. Merging firms create uncertainty; yet, under the existing legal framework, consumers bear most of the risk from this uncertainty. The process of deriving the formula highlights how a prospective change in quality, from the status quo to a potentially lower level of service, creates risk for consumers. Lower quality may not be realized, but that is irrelevant—new risk is created by the merger. This risk should not be borne by consumers (at least, not without compensation). If possible, the risk should be shifted to the parties generating the uncertainty and largely controlling whether any anti-competitive effects arise.

ENDNOTES

[1] Schwanen is clear that innovation is a broader and more dynamic concept than efficiency, one that extends beyond competition policy. While improved efficiency can unlock resources that can be devoted to research or product development, competition law has, to date, tended to avoid innovation effects, preferring to discuss quality or price effects. (Daniel Schwanen, "Commentary No. 636: Calibrating Competition Policy for the Digital Age", *C.D. Howe Institute* (February 2, 2023), online: <https://www.cdhowe.org/public-policy-research/calibrating-competition-policy-digital-age>.) Moreover, as Iacobucci notes, "Economic efficiency [including both consumer surplus and production efficiencies] is always at stake in competition matters" (Edward M. Iacobucci, "Examining the Canadian *Competition Act* in the Digital Era", *Government of Canada* (September 27, 2021) at 56, online: <https://sencanada.ca/media/368377/examining-the-canadian-competition-act-in-the-digital-era-en-pdf.pdf>.) Other objectives can often be best addressed with other policies.

[2] Ross convincingly argues that "[o]ne strength of Canadian merger law is that it recognizes that anticompetitive effects and efficiencies are two distinct effects that may be produced by a merger. Any particular merger may lead to either, both or neither effects being observed. When they both arise in a case, they are typically of opposite signs in terms of social welfare—the efficiencies a positive consequence, the lessening of competition (and deadweight loss) a negative consequence. Under the total welfare standard we then just add them up to come to a decision". (Thomas W. Ross, "Proposals for Amending the Competition Act" (2022) 35:1 Can Competition L Rev 1 at 22.

[3] The focus of this paper is on Bureau decision-making as it is the party who decides whether to challenge a transaction. However, merging parties, who may or may not have better information, must also address uncertainty. Ultimately, it may be the Tribunal who is asked to decide.

[4] *Competition Act*, RSC 1985, c C-34.

[5] It is worth noting that this ex-ante merger control is common. Many other countries evaluate mergers prior to approving or challenging the transaction.

[6] Quantifying anti-competitive effects (e.g., price increases, quality degradations, reduced incentives for innovation, etc.) is necessary because the Bureau must decide whether to challenge a proposed merger before the firms actually merge. The Bureau—acting on behalf of Canadians—weighs the likely anti-competitive effects and potential offsetting efficiencies before challenging a merger. The conventional rationale for this approach is that it is exceedingly costly to force a divestiture after firms have invested in combining (i.e., proverbially, it is hard to unscramble the egg). Moreover, Ross, *supra* note 2 at 24, argues that "the increased complexity of mergers has made it challenging or impossible to review all of the new information, prepare court filings, obtain a hearing date, and complete a hearing" within the Bureau's standard statutory time constraints.

[7] See e.g. European Union Competition Law Review, "Error Types: The Role of Error Analysis in Antitrust Cases and Why Antitrust Cases are Vulnerable to Erroneous Decisions", *European Union Competition Law*, online: <https://www.eucomplaw.com/error-types/>.

[8] Occasionally overlooked, it remains important to emphasize that competition law is designed to promote innovation and support competition. It acts as a safeguard against anti-competitive conduct that harms consumers.

[9] Firms may not face the "risk" of errors arising from too strict enforcement in the same way that consumers do, but there are costs—namely, the opportunity cost of foregoing efficiency promoting activities if the Bureau is too strict.

[10] This is true regardless of whether any anti-competitive harm arises from the merger. This is known as a risk externality. Risk externalities reduce consumer welfare given three conditions are satisfied. First, consumers are not directly party to the decision to merge. Second, there is risk or uncertainty with respect to the effects of the merger. Third, consumers are risk averse. These three conditions are satisfied for most mergers, hence consumers are made worse off due to merging firms failure to internalize risk.

[11] It is important not to get hung up on the word "bond". The notion of a merger bond is intended to be generic, referring both to a particular merger control procedure plus an associated financial assurance posted by merger proponents. There is nothing about bonds that is critical to the framework.

[12] The bond would be held by an arms-length third party, not the Competition Bureau.

[13] Financial assurance or sureties can take any of several forms, including cash, cash equivalents (certified cheques, money orders, bank drafts), surety bonds, qualified trusts or irrevocable standby letters of credit. Christopher Langdon, Patrick Deutscher and Dave Nikolejsin, "Adjusting to BC's Increased Reclamation Bonding Requirement", *McCarthy Tetrault* (August 19, 2022), online: <https://www.mccarthy.ca/en/insights/blogs/mining-prospects/adjusting-bcs-increased-reclamation-bonding-requirements>.

[14] On the renewed interest in Canadian competition policy, see Howard Wetston, "Consultation Invitation - Examining the Canadian Competition

Act in the Digital Era", *Senate of Canada* (October 27, 2021), online: <https://sencanada.ca/media/368379/letter-pdf.pdf>. John Lorinc, "It's time for Canada to create competition policies that actually benefit consumers", *The Globe and Mail* (September 21, 2022), online: <https://www.theglobeandmail.com/business/rob-magazine/article-competition-act-consolidation-regulation-canada/>; Vass Bednar, "Is the Competition Bureau's efficiency defence still defensible?", *Financial Post* (August 30, 2022), online: <https://financialpost.com/telecom/vass-bednar-is-the-competition-bureaus-efficiency-defence-still-defensible>. Interest in competition law and policy is echoed internationally as well. See e.g., Dany H. Assaf, and Omar Wakil, "Competition Act and Investment Canada Act Amendments" (Torys Webinar: February 8, 2023).

[15] Innovation, Science and Development Canada ("ISED"), *The Future of Competition Policy in Canada* (Government of Canada: 2022) at 9, online: <https://ised-isde.canada.ca/site/strategic-policy-sector/en/marketplace-framework-policy/competition-policy/future-competition-policy-canada>.

[16] *Ibid* at 5.

[17] For the purposes of this note, I omit the details leading to this formula. They are available upon request. Of note, a range of comparable approaches can likewise determine the appropriate value of a merger bond. Discussion of these is beyond the scope of this paper.

[18] An immediate critique is that merger bonds allow merging companies' ability to "buy" an anti-competitive merger. In one sense, this is accurate: by forfeiting the bond when the merged firm has engaged in anti-competitive behaviour, barring additional remedies, the parties have effectively purchased the right to engage in anti-competitive conduct. However, this perspective is incomplete on two accounts. First, it neglects the roles of uncertainty and is imprecise about the counterfactual. If, for instance, the counterfactual state of the world involves a positive probability that the anti-competitive merger would be approved without requiring a merger bond, then requiring that the companies post a bond, which they will ultimately forfeit, leaves Canadians unambiguously better off. They at least obtain the value of the bond. The second reason is more compelling. Competition in many industries, particularly regulated sectors with natural monopoly-like technologies, can be characterized as "competing for the market" rather than "competing in the market." As Demsetz first argued, when there is competition for the market, it is possible to arrange outcomes (e.g., using the bond funds to subsidize prices), to achieve welfare enhancing outcomes: Harold Demsetz, "Why Regulate Utilities?" (1968) 11:1 JL and Econ 55. Demsetz and subsequent authors often suggested using auctions. Competition among bidders for the right to be the monopoly provider of a good or service would drive the combined auction plus market price to the first-best level. In many ways, a forfeit merger bond resembles this competition for the market perspective. This means that an appropriately priced merger bond, even if forfeited, does not necessarily leave consumers worse off.

[19] There are alternative ways to think about merger bonds. For instance, a

bond could apply exclusively to a divestiture when there is uncertainty whether a particular divestiture fully addresses the anti-competitive harm arising from the transaction. Such a "remedy bond" could be used to safeguard against divestitures that do not remedy the anti-competitive effects of the merger. More immediately, and more interestingly, the ISED Minister's conditions—and associated monetary penalties—imposed on Videotron and Rogers related to the Rogers-Shaw transaction are effectively a version of a merger/remedy bond. See ISED, "Statement from Minister Champagne concerning competition in the telecommunication sector", *Government of Canada* (March 31, 2023), online: <https://www.canada.ca/en/innovation-science-economic-development/news/2023/03/statement-from-minister-champagne-concerning-competition-in-the-telecommunication-sector.html>.

[20] In the United States there exists a right of private action, under Section 7 of the *Clayton Act*, to sue for damages following a merger as has been done, for example, in the T-Mobile-Sprint Merger (*Dale et al v Deutsche Telekom AG et al*, 1:22-cv-03189, Northern District of Illinois) and *Steves and Sons Inc v JELD-WEN Inc*, 988 F (3d) 690; see also Erin L. Fishcer, "Private Merger Challenges Under Section 16 of the Clayton Act: Caution Post—*JELD-WEN*" (2021) 170 U Pa L Rev 141; The National Law Review, "The 4th Circuit Affirms Groundbreaking Divestiture Order in Private Clayton Act Suit Challenging Completed Merger", *National Law Review* (March 4, 2021), online: <https://www.natlawreview.com/article/4th-circuit-affirms-groundbreaking-divestiture-order-private-clayton-act-suit>. Thus, private merger enforcement could be a substitute for merger bonds, something that is clearly permitted by some statutes. For any violation of the antitrust laws, plaintiffs may seek treble damages under section 4 of the Clayton Act or relief in equity under section 16 of the Clayton Act. Currently, there are two challenges with private merger enforcement. First, actions for damages are subject to a four-year statute of limitations. Any attempt to compensate consumers for anti-competitive effects after this limitation period is not possible. Second, as highlighted by Ross, *supra* note 2, private actions in Canada are much more limited and tend to be focused on price-fixing and deceptive practices.

[21] Uncertainty creates a policy dilemma for the Bureau. Approving a merger promises short-term, private gains to the merging parties. However, it also leads to uncertain, long-term risks for Canadians. Even if both merging firms and the Bureau are relatively confident that the merger will generate production efficiencies, it is still possible that, after a few years, eliminating a competitor harms competition. Currently, it is these uncertain future implications that dog Canadian merger review.

[22] As Ross, *supra* note 2 at 20, highlights "there is a great deal of evidence now that firms, in general, do not achieve the efficiencies that they claimed will be available post-merger".

[23] On existing liability gaps, see Iacobucci, *supra* note 1; Ross, *supra* note 2.

[24] Matthew Chiasson and Paul A. Johnson, "Canada's (In)efficiency Defence: Why Section 96 May do More Harm than Good for Economics Efficiency and Innovation" (2019) 32:1 Can Competition L Rev .

[25] Public Interest Advocacy Centre, "PIAC comments on Senator Wetston's Inquiry on Canadian Competition Act in the Digital Era", *Public Interest Advocacy Centre* (December 16, 2021), online: <https://www.piac.ca/2021/12/16/piac-comments-on-senator-wetstons-inquiry-on-canadian-competition-act-in-the-digital-era/>.

[26] This is the Bureau recommendation 7.1 in their response to the solicitation of Senator Wetston: Competition Bureau of Canada, "Examining the Canadian Competition Act in the Digital Era: Submission by the Competition Bureau", *Government of Canada* (February 8, 2022), online: <https://www.competitionbureau.gc.ca/eic/site/cb- bc.nsf/eng/04621.html>.

[27] Indeed, the Organization for Economic Cooperation and Development (OECD) advocates for market studies for precisely this reason: OECD, "Market Studies and Competition", *OECD* (accessed February 24, 2023), online: <https://www.oecd.org/daf/competition/market-studies-and-competition.htm>.

[28] ISED, *supra* note 15 at 23.

[29] Avinash Dixit and Robert Pindyck, *Investment Under Uncertainty*, (Princeton University Press: 1994).

[30] Further, knowing that they must undertake ex-post review, the Bureau could tailor its information collection methodologies to best measure the effects of the merger during the review.

[31] EcoFiscal Commission, *Responsible Risk: How putting a price on environmental risk makes disasters less likely*, (July 2018), online: <https://ecofiscal.ca/wp-content/uploads/2018/06/Ecofiscal-Commission-Risk-Pricing-Report-Responsible-Risk-July-11-2018.pdf>.

[32] Langdon et al, *supra* note 13.

[33] *Pipeline Safety Act*, SC 2015, c 21.

[34] See Iacobucci, *supra* note 1, and Ross, *supra* note 2, as examples.

[35] Ross, *supra* note 2 at 14.

[36] This follows from a classic result in the analysis of the economics of tort law. See e.g., Robert Cooter and Ulen Thomas, *Law & Economics*, 5th ed (Boston: Pearson Addison Wesley, 2007).

[37] On the evidence for merger remedies, see John Kwoka, Mergers, *Merger Control, and Remedies: A Retrospective Analysis of U.S. Policy*, (Cambridge: The MIT Press: 2015).

[38] Francesco Ducci, "Randomization as an Antitrust Remedy" (forthcoming) Berkeley Bus LJ. See also Michael Gal and Nicolas Petit, "Radical Restorative Remedies for Digital Markets" (2021) 36 BTLJ 617.

[39] Readers seeking details can contact the author. For additional discussion, see Edward Schlee and V. Kerry Smith. "The Welfare Cost of Uncertainty in Policy Outcomes" (2020) NBER Working Paper No 22864.

[40] *Ibid.*

[41] V. Kerry Smith, *Can Environmental Bonds Manage Policy Induced Risks?* (2014) [unpublished].

[42] For example, $\text{Bond Price} = \sum_i M_i \left(\frac{1}{4} \pi(s_i(R - \eta_i) + \theta_i) \cdot \left(\frac{Q_1 - Q_0}{Q_0} \right)^2 \right)$.

[43] Sherwin Rosen, "Hedonic prices and implicit markets: product differentiation in pure competition" (1974) J 82:1 Political Economy 34; Michael Greenstone, "The Continuing Impact of Sherwin Rosen's 'Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition'" (2018) 125:6 J Political Economy 1891.

[44] See e.g., Levon Barseghyan et al, "Estimating Risk Preferences in the Field" (2018) 56:2 J Economic Literature 501.

[45] For example, within its Guide to Integrated Risk Management: Treasury Board of Canada, "Guide to Integrated Risk Management", *Government of Canada* (2022), online: <https://www.canada.ca/en/treasury-board-secretariat/corporate/risk-management/guide-integrated-risk-management.html>.