

## COMPETITIVE PUBLIC CONTRACTS

*Eric M. Singer\**

INTRODUCTION.....	1298
I. THE GOVERNMENT’S CONTRACT-REMEDIES PROBLEM.....	1305
A. <i>Background</i> .....	1305
B. <i>The Problem with Money Damages</i> .....	1310
C. <i>The Problem with Vendor Screening and Oversight</i> .....	1314
D. <i>The Problem with Relational Contracts</i> .....	1319
II. COMPETITIVE DUAL SOURCING AS CONTRACT ENFORCEMENT.....	1322
A. <i>Competitive Dual Sourcing Explained</i> .....	1322
B. <i>Variations</i> .....	1326
1. <i>Geographic Division</i> .....	1326
2. <i>Operational Division: New York Subway</i> .....	1328
3. <i>Division by Competition: First Transcontinental             Railroad</i> .....	1330
4. <i>Temporal Division</i> .....	1332
5. <i>Substitution</i> .....	1335
6. <i>Variations in Shifting Mechanisms</i> .....	1336
C. <i>Competitive Dual Sourcing versus Performance Bonds</i> .....	1338
III. IMPLEMENTING COMPETITIVE DUAL SOURCING.....	1342
A. <i>Agent Incentives</i> .....	1342
B. <i>Industry Preferences</i> .....	1344
IV. MINIMIZING THE COSTS OF COMPETITIVE DUAL SOURCING.....	1347
A. <i>Administrative Costs</i> .....	1347
B. <i>Economies of Scale</i> .....	1349
C. <i>Collusion and Sabotage</i> .....	1350
D. <i>Waiver of Competitive Dual Sourcing</i> .....	1353
CONCLUSION.....	1354

---

\* Searle Fellow, New York University School of Law. I gratefully acknowledge the many helpful comments and guidance provided by Lisa Bernstein, Ryan Bubb, Richard Epstein, Wendy Epstein, Sam Estreicher, Lee Fennell, Marian Moszoro, Julie Roin, Karen Schultz, Katrina Wyman, and Steve Yelderman, as well as the members of the NYU Lawyering Scholarship Colloquium, the Canadian Law & Economics Association, and the Midwest Law & Economics Association. Many thanks are also owed to the participants of faculty workshops held at the University of Arizona, the University of Calgary, and the University of Chicago.

## INTRODUCTION

ON June 22, 1995, a sinkhole, more than seventy feet in diameter, tore through Hollywood Boulevard in downtown Los Angeles. This was not an Act of God, but of an entity decidedly more earthly: the private contractor hired by the Los Angeles County Metropolitan Transportation Authority (“Metro”)<sup>1</sup> to tunnel for twelve miles through downtown Los Angeles to construct the new Los Angeles subway system. Purportedly as a cost- and time-saving measure, Metro assigned to this single contractor the entirety of the tunnel work. The contractor took some cost- and time-saving measures of its own, including substituting scrap wood and garbage for the proper concrete-and-steel structures needed to support the earth above.<sup>2</sup> And so the Hollywood Boulevard sinkhole was born.

The sinkhole was not Metro’s first problem with its tunneling contractor. In March 1994, more than a year prior to the sinkhole, the contractor lost control of a locomotive, injuring three workers.<sup>3</sup> A few months later, a portion of the nascent tunnel exploded, injuring three more.<sup>4</sup> Shortly thereafter, Hollywood Boulevard sank nearly ten inches due to inadequate tunnel supports.<sup>5</sup> Although hindsight is 20/20, the June 1995 sinkhole appears predictable after the contractor’s many missteps in 1994, including the same construction shortcut (poor tunnel supports) having caused the same problem (surface collapse) on the same road (Hollywood Boulevard). Yet the contractor remained on the job for another disastrous year. Metro, however, was not blind to these performance problems, and its failure to either terminate or induce better performance

---

<sup>1</sup> The contract was actually entered into in 1992, by Metro’s predecessor agency, the Los Angeles County Transportation Commission (“LACTC”). See Metro, Los Angeles Transit History, <https://www.metro.net/about/library/about/home/los-angeles-transit-history/> [https://perma.cc/HT75-TAXN]. For the sake of clarity, this Article will refer to the agencies only as Metro or Metro Transit Authority.

<sup>2</sup> Jeffrey L. Rabin, MTA to Settle Suits, Pay \$3.5 Million to Contractor It Fired, L.A. Times (Feb. 26, 1999), <http://articles.latimes.com/1999/feb/26/news/mn-12007> [https://perma.cc/ANV5-5WGF].

<sup>3</sup> Tina Daunt & Edward J. Boyer, MTA Fires Subway Tunnel Contractor, L.A. Times (July 14, 1995), [http://articles.latimes.com/1995-07-14/news/mn-23804\\_1\\_subway-tunnel](http://articles.latimes.com/1995-07-14/news/mn-23804_1_subway-tunnel) [https://perma.cc/K79U-NML5].

<sup>4</sup> Id.

<sup>5</sup> David Willman, Inferior Tunnel Braces Cited in Ground Sinkage, L.A. Times (Sept. 27, 1994), [http://articles.latimes.com/1994-09-27/news/mn-43664\\_1\\_wood-wedges](http://articles.latimes.com/1994-09-27/news/mn-43664_1_wood-wedges) [https://perma.cc/XNW2-LVST].

from its contractor cannot fairly be credited to a problem of governance as much as to a problem with government contracts.

This Article argues that the problem with government-contractor performance under public procurement contracts is fundamentally a contract-remedies problem: Governments, and state and local governments in particular, lack an effective contract remedy to deter or correct misbehavior. Because a government cannot terminate a contract without incurring substantial costs<sup>6</sup>—including political costs—the government has no credible threat that it can wield to affect a contractor's performance. Of course, an inability to rely on traditional contract damages to deter and enforce breaches of contract is not a problem unique to government buyers. However, whereas private buyers often rely on a number of alternatives to breach-of-contract claims to credibly commit to and enforce performance, various limitations unique to government often prevent the implementation of these alternative contracting approaches.

Metro's problems with its tunneling contractor highlights the ineffectiveness of the remedies ordinarily relied upon by a government. Metro certainly did not ignore the problems with its subcontractor. Indeed, in the summer of 1994, after the Los Angeles subway contractor had revealed itself as a menace, termination was seriously considered, but the cost-benefit analysis performed by Metro counseled against it. Metro determined that terminating and replacing the problematic contractor would increase project costs by more than fifty percent and substantially

---

<sup>6</sup> The government cannot simply hire a replacement and move on, but instead—as mandated by competitive-bidding regulations—must ordinarily restart the entire selection process, with substantial delay and expense. In general, the selection process includes conducting market research on firms that are able to do the work, drafting a solicitation with technical specifications clear enough to permit potential vendors to prepare their bids, and granting those vendors adequate time to prepare their bid packages. Once bids are received, the required evaluation process often involves multiple meetings of an evaluation committee and oral presentations before firms are ranked. Later steps include performing due diligence on the top-ranked firm, the possibility of an administrative bid protest that must be adjudicated before a contract may be awarded, and finally, whatever public hearing and other procedural requirements apply to the ultimate award of the contract. Altogether, for a complex, contested contract, this contractor-selection process often lasts two years or more and can cost millions of dollars. Terminating a troublesome contractor therefore has serious consequences. See, e.g., Janna J. Hansen, *Limits of Competition: Accountability in Government Contracting*, 112 *Yale L.J.* 2465, 2489 (2003) (noting that the New York City Administration for Children's Services awards contracts for the maximum possible term due to the time required to reprocur contractors at the end of the contract term).

delay the opening of the subway.<sup>7</sup> And so Metro soldiered on, resolving to increase oversight and wishing for an improvement that never came.<sup>8</sup>

The Los Angeles subway experience certainly does not reflect the worst possible outcome for a public project.<sup>9</sup> Metro was, in fact, remarkably fortunate to have vetted available alternate contractors, placing it in a much better position than is typical when an agency must replace a contractor.<sup>10</sup> Metro also had every incentive to perform—the Los Angeles subway was its signature and most controversial project, and a success would make the case for future expansions of the system.<sup>11</sup> Furthermore, the *Los Angeles Times* was quick to scrutinize and report on every perceived misstep, having assigned two journalists to report on the subway project *full-time*.<sup>12</sup> And yet Metro still could not remedy a problematic contract without significant delay and expense.<sup>13</sup> Such delays

---

<sup>7</sup> Daunt & Boyer, *supra* note 3.

<sup>8</sup> See *id.* It was not until the collapse of Hollywood Boulevard in June 1995 when the agency finally gave up on its contractor, with the tunnels more than eighty percent complete. *Id.*

<sup>9</sup> The problems Metro faced with its subway project hardly register compared to, for example, the Central Artery Tunnel (the “Big Dig”) construction project in Boston, which featured delays and cost overruns of nearly ten years and several billion dollars and the death of an innocent motorist due to contractor misconduct. See Jason H. Peterson, Note, The Big Dig Disaster: Was Design-Build the Answer?, 40 *Suffolk U. L. Rev.* 909, 909–10 (2007); Abby Goodnough, 2 Big Dig Companies to Pay \$407 Million, *N.Y. Times* (Jan. 24, 2008), <http://www.nytimes.com/2008/01/24/us/24dig.html> [<https://perma.cc/TL62-F7WD>].

<sup>10</sup> Unlike the ordinary case where the government is left with nothing after terminating a contractor, Metro had the benefit of ongoing contracts with other subway construction contractors assigned to other, smaller portions of the work. Metro therefore voted to waive its ordinary competitive-bidding procedures and instead award the remaining tunneling work to its existing contractors via an expedited, competitive process. See Memorandum from Stanley G. Phernambucq, Chief Construction Officer, L.A. Cty. Metro. Transit Auth., to Metro Construction Committee 1 (July 20, 1995), [http://boardarchives.metro.net/Items/1996/01\\_January/items\\_g\\_0191.pdf](http://boardarchives.metro.net/Items/1996/01_January/items_g_0191.pdf) [<https://perma.cc/5RTE-L4CV>]. Metro estimated that this approach would save a minimum of six months as compared to a new procurement for a single replacement tunnel contractor. *Id.* at 2 (“Alternatives Considered”).

<sup>11</sup> See Ethan N. Elkind, *Railtown: The Fight for the Los Angeles Metro Rail and the Future of the City* 89–90, 94, 101, 118 (2014).

<sup>12</sup> *Id.* at 116.

<sup>13</sup> Because Metro’s preexisting contracts with the intended substitute contractors did not require the performance of out-of-scope work, the substitute contractors had all the leverage when negotiating the substitute contracts. Intended substitute contractors either elected not to undertake the new work or demanded substantially higher prices. See Memorandum from Stanley G. Phernambucq, Chief Construction Officer, L.A. Cty. Metro. Transit Auth., to Metro Construction Committee 1–3 (Jan. 11, 1996), [http://boardarchives.metro.net/Items/1996/01\\_January/Items\\_A\\_0722.pdf](http://boardarchives.metro.net/Items/1996/01_January/Items_A_0722.pdf) [<https://perma.cc/NJZ5-RESA>]. Ultimately, the cost to complete the remaining ten percent of the tunnels was nearly half the amount that was

and expenses are, of course, not unique to Los Angeles or to subway contracts,<sup>14</sup> but frequently affect government contracts of all types and across all jurisdictions.<sup>15</sup>

Government-contractor performance is not a problem that has gone unnoticed, but the literature has not adequately addressed the problem. There is recent literature focused on private contractors' political accountability to the public when government services have been outsourced to the private sector.<sup>16</sup> This literature has proposed various solutions to enhance political accountability, from new administrative remedies made available to the public<sup>17</sup> to the inclusion of new contractual mandates focused on accountability, such as a requirement to act in the public's best interest.<sup>18</sup> This focus on political accountability is too circumscribed, however. Many forms of contractor misbehavior simply lack a political dimension until it is too late—whether a construction contractor uses wooden or concrete roadway supports, for example, is not a politically salient issue—at least not before the project has col-

---

spent completing the first ninety percent. See Rabin, *supra* note 2 (stating that Metro paid \$225 million to original and replacement contractors); Daunt & Boyer, *supra* note 3 (identifying the original contract amount as \$178.6 million). Perhaps more costly than the construction cost overruns, the opening of the subway was delayed by six months. See L.A. Cty. Metro. Transit Auth., *Construction Update: Metro Red Line Segment 2 Hollywood Extension*, at 2 (Mar. 23, 1998), [http://boardarchives.metro.net/Items/1998/03\\_March/10.pdf](http://boardarchives.metro.net/Items/1998/03_March/10.pdf) [<https://perma.cc/2WJ6-KTJH>].

<sup>14</sup> See U.S. Dep't of Transp., *Fed. Transit Admin., The Predicted and Actual Impacts of New Starts Projects - 2007: Capital Cost and Ridership 1-5* (2008) (on file with Virginia Law Review Association) (comparing predicted to actual subway construction costs).

<sup>15</sup> See, e.g., Luigi Moretti & Paola Valbonesi, *Firms' Qualifications and Subcontracting in Public Procurement: An Empirical Investigation*, 31 *J.L. Econ. & Org.* 568, 590-91 (2015) (observing time overruns in 91.8% and 93.1% of the regional and municipal projects studied, respectively, and cost overruns in 84.5% and 86.6% of the same projects, respectively); Major Kevin J. Wilkinson, *More Effective Federal Procurement Response to Disasters: Maximizing the Extraordinary Flexibilities of IDIQ Contracting*, 59 *A.F. L. Rev.* 231, 234-35 (2007) (explaining overpricing and performance issues for federal logistics contracts, resulting in the termination of the contractor and re-bid of the project).

<sup>16</sup> See Kimberly N. Brown, "We the People," *Constitutional Accountability, and Outsourcing Government*, 88 *Ind. L.J.* 1347, 1348-50 (2013); Jody Freeman, *The Private Role in Public Governance*, 75 *N.Y.U. L. Rev.* 543, 545-49 (2000).

<sup>17</sup> See Jack M. Beermann, *Privatization and Political Accountability*, 28 *Fordham Urb. L.J.* 1507, 1507-09 (2001).

<sup>18</sup> Wendy Netter Epstein, *Contract Theory and the Failures of Public-Private Contracting*, 34 *Cardozo L. Rev.* 2211, 2251-58 (2013); see also Jody Freeman, *The Contracting State*, 28 *Fla. St. U. L. Rev.* 155, 201-02 (2000) (identifying contractual provisions that could be used to increase political accountability, such as requiring the contractor to follow administrative procedures).

lapsed. Furthermore, new contractual provisions place yet more pressure on the underlying remedies problem by creating yet another potential reason for disciplining a contractor (adding to poor technical performance, cost overruns, etc.) when there is no effective means for doing so.

This Article proposes competitive dual sourcing (“CDS”) as a remedial solution to the larger contractor-performance problem. CDS is a version of dual sourcing, which is a contractual strategy of horizontally splitting the work between two firms. What this Article refers to as CDS goes one step further by reserving authority, through contractual options, to reassign all or portions of the work from one firm to the other. CDS decreases the cost (and thus increases the credibility) of contract termination. CDS also creates incentives for full contractor performance<sup>19</sup> and for the two firms to monitor and report the misbehavior of each other, thereby enhancing contract oversight *and* political accountability. CDS can therefore complement solutions focusing on political accountability both by giving accountability-focused contractual provisions some teeth and by making more information on contractor performance available to the public.

Although single sourcing is the dominant contracting strategy for subnational government projects,<sup>20</sup> dual sourcing is a long-proven model for complex public projects. In fact, the most significant municipal project in U.S. history, the 1913 build-out of the New York Subway, was the product of dual sourcing, with the implementing contracts aptly designated the “Dual Contracts.”<sup>21</sup> Similarly, the First Transcontinental

---

<sup>19</sup> See Thomas P. Lyon, Does Dual Sourcing Lower Procurement Costs?, 54 J. Indus. Econ. 223, 228 (2006) (“The threat of using the second source allows the buyer to induce better performance from the incumbent.”).

<sup>20</sup> See, e.g., Dep’t of Admin. Servs., Ga. Procurement Manual § 5.9.1.3 (Jan. 2016), [http://pur.doas.ga.gov/gpm/MyWebHelp/GPM\\_Main\\_File.htm](http://pur.doas.ga.gov/gpm/MyWebHelp/GPM_Main_File.htm) (expressing preference for single sourcing and noting that multiple sourcing should be uncommon in state-agency contracts); Metro. Transit Auth. Capital Construction, Quarterly Report: Second Avenue Subway Phase 1, 4th Quarter 2013, at 40 (2013), [http://web.mta.info/capital/sas\\_docs/Second%20Avenue%20Subway-%20Quarterly%20Report%202013%20Q4.pdf](http://web.mta.info/capital/sas_docs/Second%20Avenue%20Subway-%20Quarterly%20Report%202013%20Q4.pdf). [<https://perma.cc/YG32-YPKC>] (identifying a single firm-awarded tunneling contract for New York’s Second Avenue Subway Project); see also William B. Burnett & William E. Kovacic, Reform of United States Weapons Acquisition Policy: Competition, Teaming Agreement, and Dual Sourcing, 6 Yale J. on Reg. 249, 260–61 (1989) (explaining the historical prevalence of single sourcing in military procurements, prior to 1980s reforms that favored dual sourcing for certain military contracts).

<sup>21</sup> See *infra* Subsection II.B.2.

Railroad, authorized in 1861, was the product of CDS, with an emphasis on competitive—each of two competing railroads started at opposite ends of the route and raced to build as much track as possible before meeting the other.<sup>22</sup>

Dual sourcing in its generic form has also received some, albeit limited, attention in academic literature. There is a robust industrial economics literature on procurement sourcing strategies that supports the utility of dual sourcing through both theoretical modeling<sup>23</sup> and empirical studies<sup>24</sup> that focus primarily on acquisition costs,<sup>25</sup> as opposed to contractor performance. Dual sourcing has received much more limited attention in legal scholarship, with a focus on either private or military procurement.<sup>26</sup> Like private procurement, federal military procurement operates in a very different institutional setting than state and local government procurement, in part due to the federal government serving as the sole buyer of the vendors' products, creating an ongoing, symbiotic relationship between the Department of Defense and suppliers, with each heavily invested in the future of the other.<sup>27</sup> This relationship, which is not present in state- and local-government contracting, may itself deter seller opportunism, and in any case, federal military procure-

---

<sup>22</sup> See *infra* Subsection II.B.3.

<sup>23</sup> See, e.g., Roman Inderst, *Single Sourcing Versus Multiple Sourcing*, 39 *RAND J. Econ.* 199, 199 (2008) (concluding that dual sourcing is the optimal sourcing strategy for all but the largest buyers); Ranga V. Ramasesh et al., Note, *Dual Sourcing with Nonidentical Suppliers*, 40 *Naval Res. Logistics* 279, 288 (1993) (concluding that dual sourcing yields savings as compared to single sourcing).

<sup>24</sup> See, e.g., Lyon, *supra* note 19, at 248 (analyzing Air Force missile procurements and concluding that dual sourcing on average lowers procurement costs).

<sup>25</sup> See Jim Leitzel, *Competition in Procurement*, 25 *Pol'y Sci.* 43, 43 (1992) ("Many studies have attempted to determine the savings (in terms of price decreases) from second or dual sourcing.").

<sup>26</sup> Major Kevin Wilkinson recently analyzed the benefits of awarding multiple supply contracts for disaster-relief efforts, as opposed to single awards or noncompetitive awards using emergency procurement procedures. Wilkinson, *supra* note 15. Previously, Everett Pyatt, then the Senior Procurement Executive for the U.S. Navy, described his experience with dual sourcing for the *Yale Journal on Regulation*. Everett Pyatt, *Procurement Competition at Work: The Navy's Experience*, 6 *Yale J. on Reg.* 319 (1989). The most comprehensive analysis of dual sourcing, also in the military-procurement context, was published in the same journal by William B. Burnett and William E. Kovacic and focuses on the military-procurement reforms of the 1980s that favored dual-sourcing procurement strategies for volume production contracts. See Burnett & Kovacic, *supra* note 20, at 282–94. Burnett and Kovacic analyze both the cost and noncost benefits of dual sourcing, including incentivizing better contractor performance and insuring against supply disruptions.

<sup>27</sup> See, e.g., William P. Rogerson, *Economic Incentives and the Defense Procurement Process*, 8 *J. Econ. Persp.* 65, 65–70 (1994) (analyzing military procurement).

ment is enough of an outlier conceptually as to be excluded from the breadth of this Article.

This Article contributes to the literatures on public procurement, contract remedies, and sourcing strategies by analyzing private-law contract remedies and strategies in the context of government institutions and by theoretically grounding CDS as the best available remedial strategy for nonmilitary public procurement contracts, particularly at the state and local level. The core argument moves in two steps. First, in Part I, this Article summarizes the literature on remedial strategies utilized by private buyers, such as reputation-based, relational contracts, and explains the obstacles preventing governments from effectively utilizing these remedies. These obstacles include principal-agent problems and political impediments that hamper the production and the consideration of the reputational information relied upon by private firms to discipline contractors. Further, certain regulations, such as requirements that contracts be rebid every  $n$  years, preclude reliance on many private contracting strategies, such as indefinite-term relational agreements.

Second, Part II of this Article explains how CDS can be implemented as a remedial solution in subnational government procurement contracts of all types and outlines the various forms that CDS can take to fit virtually any procured good or service.<sup>28</sup> These forms include geographic contract divisions (e.g., Firm *A* provides services on the east side of the city and Firm *B* provides services on the west side), operational divisions (e.g., Firm *A* operates subway line *X* and Firm *B* operates line *Y*), and divisions by ongoing competition (e.g., whichever firm first completes the first stage of a project is awarded a larger share of the second stage). This part also analyzes performance bonds, which are widely utilized in government construction contracts, as a type of dual sourcing, contrasted with CDS.

Of course, CDS is not a costless remedy. If that were the case, one would expect at least private buyers to rely upon it in every instance. Although private buyers have, in recent years, increasingly turned to dual sourcing to discipline their suppliers,<sup>29</sup> private firms still primarily re-

---

<sup>28</sup> This Article does not address public contracts that do not involve the procurement of a specified good or service, such as natural-resources leases and other contracts that convey rights to government property.

<sup>29</sup> Private firms have, however, recognized the contract-management benefits of dual sourcing, and at least some firms have recently increased their dual sourcing in part for this reason. Cummins Inc., Annual Report (Form 10-K) at 11 (Dec. 31, 2014) (seeking to in-

ly upon reputation-based strategies.<sup>30</sup> However, in a world where the government cannot employ the private sector's reputation-based solutions effectively, CDS is the next-best alternative and should be implemented widely in government procurement contracts. Accordingly, Part III of this Article identifies the institutional barriers to implementing CDS and how those barriers can be overcome. Finally, Part IV addresses design considerations that can minimize or eliminate the potential drawbacks of CDS, including higher transaction costs, lost economies of scale, opportunities for collusion between the two firms, and the limited situations where CDS is not possible or advisable. A brief conclusion follows.

## I. THE GOVERNMENT'S CONTRACT-REMEDIES PROBLEM

### *A. Background*

Government buyers may experience difficulty relying on contract damages to discipline their contractors, but so too do private buyers. The traditional contract model presumes that expectancy damages will both deter inefficient breaches and, in the event of a breach, make the non-breaching party whole.<sup>31</sup> But in practice, private firms only rarely rely on the prospect of expectancy damages to induce full performance by the other party. A variety of factors, including limitations on damages imposed by judge-made rules, litigation costs, and uncertainty associated with assessing damages *ex post* ordinarily lead firms to rely on alternatives to contract damages to discipline their suppliers.<sup>32</sup> Indeed, private firms often eschew money damages altogether, instead relying upon in-

---

crease dual sourcing to 64% of direct material expenditures “to minimize risk and increase supply chain responsiveness”); Ford Motor Co., Annual Report (Form 10-K) at 16 (Dec. 31, 2014) (“[T]he exclusive supplier of a key component potentially could exert significant bargaining power over price, quality, warranty claims, or other terms relating to a component.”).

<sup>30</sup> Dual sourcing is, however, frequently used in the private sector in certain situations, such as to mitigate the risk of an unexpected supply-chain disruption due to external forces such as natural disasters. Haisheng Yu et al., *Single or Dual Sourcing: Decision-making in the Presence of Supply Chain Disruption Risks*, 37 *Omega* 788, 789 (2009).

<sup>31</sup> See Daniel R. Fischel & Alan O. Sykes, *Governmental Liability for Breach of Contract*, 1999 *Am. L. & Econ. Rev.* 313, 324–25.

<sup>32</sup> See Richard A. Epstein, *Beyond Foreseeability: Consequential Damages in the Law of Contract*, 18 *J. Legal Stud.* 105, 115 (1989) (explaining that private firms ordinarily stipulate their damages in commercial sales contracts); see also Benjamin Klein et al., *Vertical Integration, Appropriate Rents, and the Competitive Contracting Process*, 21 *J.L. & Econ.* 297, 303–04 (1978) (noting that businesses very rarely rely on legal contract sanctions).

formal, “relational” contracts that utilize both the threat of reputational sanctions and the prospect of continued business to incentivize full performance.<sup>33</sup> The literature on these “self-enforcing” contracts is vast, and I will not endeavor to review it in its entirety here.<sup>34</sup> However, an introduction to the strategies and remedies favored by private buyers, in lieu of traditional contract damages, provides a helpful point of departure for assessing the effectiveness of various remedies potentially available to government buyers.

Suppose that a consumer electronics company stakes its future on a new mobile device, which is heavily advertised in advance of a well-publicized release date to have class-leading battery life. If the batteries for the device, supplied by another firm, are either supplied too late or do not hold a charge, the entire company is lost. In this situation, the probability of the battery supplier having the resources to pay full compensatory damages, or of the company being able to litigate the breach and obtain specific performance before it is too late to matter, is surely small.<sup>35</sup> Here, and in other situations where private buyers face difficulties quantifying and collecting monetary damages for a breach, or where performance cannot be defined in precise, enforceable terms,<sup>36</sup> private buyers can be expected to turn to alternative, often extra-legal measures to induce full performance.<sup>37</sup>

---

<sup>33</sup> See Gillian K. Hadfield & Iva Bozovic, *Scaffolding: Using Formal Contracts to Build Informal Relations in Support of Innovation* 7 (Feb. 25, 2015) (unpublished manuscript), <http://works.bepress.com/ghadfield/48> [<https://perma.cc/X393-SZEY>] for a recent empirical study of the role of contract in business relationships, finding that private firms, across several industries, do not typically rely on contract damages to induce performance.

<sup>34</sup> For a helpful survey of the literature, see, for example, W. Bentley MacLeod, *Reputations, Relationships, and Contract Enforcement*, 45 *J. Econ. Literature* 595, 595–98 (2007).

<sup>35</sup> See, for example, Klein et al., *supra* note 32, at 300–01, for an analysis of this issue and corresponding hold-up problem in the context of a newspaper publisher contracting with a printing press. As is the case with the consumer electronics company, the losses to a newspaper publisher of delayed performance are enormous.

<sup>36</sup> See Charles J. Goetz & Robert E. Scott, *Principles of Relational Contracts*, 67 *Va. L. Rev.* 1089, 1092–93 (1981) (explaining how the performance obligations of brokers and other agents are often most effectively reduced to “best efforts” terms in relational contracts); see also Mark P. Gergen, *The Use of Open Terms in Contract*, 92 *Colum. L. Rev.* 997, 997–98 (1992) (analyzing why parties rely on relational contracts).

<sup>37</sup> See, e.g., Lisa Bernstein, *Beyond Relational Contracts: Social Capital and Network Governance in Procurement Contracts*, 7 *J. Legal Analysis* 561, 562–63 (2015).

At the front end, private firms often screen potential vendors for risk and contract only with low-risk partners, paying a premium to do so.<sup>38</sup> Risk can be assessed by measures that include the reputation of the prospective vendor.<sup>39</sup> Returning to the electronics example utilized above, the company may elect to obtain its batteries from a supplier that the firm has worked with before and that has a proven track record for supplying similar batteries, even if the company could obtain a lower price elsewhere. Similarly, General Motors has recently initiated a procurement strategy that eschews competitive bidding altogether, instead selecting suppliers based on thorough inspections of the potential suppliers' facilities and financial records.<sup>40</sup>

A private firm might also take measures to reduce the risk of vendor default by performing extensive oversight and, if needed, training its vendors and performing on-site inspections of vendor facilities.<sup>41</sup> More aggressive oversight measures might include locating an employee of the firm at the vendor's production facility to inspect each stage of the work and confirm compliance with the contractual specifications. When contract remedies are not available to deter inefficient breaches, these oversight measures can help ensure that the low-risk, experienced vendors that pass the firm's pre-contractual screening measures do not succumb to opportunism and cut corners during performance.<sup>42</sup>

Private buyers also frequently elect to eschew formal contracts entirely and instead enter into indefinite-term, informal arrangements designed to reduce vendor opportunism.<sup>43</sup> These informal, relational arrangements generally rely heavily on seller reputation and other

---

<sup>38</sup> Id. at 36–37; see also Stephen G. Gilles, *The Judgment-Proof Society*, 63 *Wash. & Lee L. Rev.* 603, 673 (2006) (“Contract creditors can choose the parties with whom they deal, avoid dealing with persons they perceive to be bad credit risks, and adjust other terms of their contracts (such as interest rates) in response to pro-debtor legal rules.”).

<sup>39</sup> Robert C. Marshall et al., *The Private Attorney General Meets Public Contract Law: Procurement Oversight by Protest*, 20 *Hofstra L. Rev.* 1, 63–64 (1991).

<sup>40</sup> David Sedgewick, *GM to Suppliers: Let's See Books, Not Bids*, *Automotive News* (May 11, 2015, 12:01 AM), <http://www.autonews.com/article/20150511/OEM10/305119952/gm-to-suppliers-lets-see-books-not-bids> [<https://perma.cc/XV6U-G5BW>].

<sup>41</sup> Bernstein, *supra* note 37, at 573–77; see also Goetz & Scott, *supra* note 36, at 1093 (identifying direct supervision as a means of ensuring performance in a relational contract).

<sup>42</sup> See Epstein, *supra* note 32, at 135 (explaining that day-to-day contract monitoring may be preferable to contract damages where valuation is difficult and a large award would result in significant deadweight losses).

<sup>43</sup> Klein et al., *supra* note 32, at 304.

nonlegal forces to discourage harmful behavior.<sup>44</sup> Reputational deterrence in some industries is maximized by leveraging existing networks of industry buyers and suppliers to ensure the dissemination of performance-related information and advertising vendor performance through awards and similar acknowledgements.<sup>45</sup>

Finally, where the costs of opportunistic vendor behavior are particularly great, private firms may abandon outsourcing entirely and instead turn to vertical integration.<sup>46</sup> A classic example of vertical integration as a remedial tool is that of newspaper publishers and printing presses.<sup>47</sup> Due to the urgent printing needs of a newspaper publisher and its corresponding susceptibility to opportunistic “hold ups” by an outside printing press, newspaper publishers often vertically integrate with their own presses. On the other hand, book publishers are not subject to the same high-stakes deadlines as newspapers and therefore generally prefer to contract with outside presses.<sup>48</sup>

At bottom, private buyers utilize a wide variety of remedial tools, both contractual and noncontractual, to achieve productive relationships with their suppliers, and in most situations prefer alternative remedial and governance mechanisms to traditional contract damages. Scholars have explored these extra-legal alternatives in great depth and in a wide

---

<sup>44</sup> *Id.*

<sup>45</sup> Bernstein, *supra* note 37, at 581–83.

<sup>46</sup> See, e.g., R.H. Coase, *The Acquisition of Fisher Body by General Motors*, 43 *J.L. & Econ.* 15, 16–17 (2000) (explaining the consensus view that General Motors vertically integrated with its body supplier to resolve a discipline problem).

<sup>47</sup> Klein et al., *supra* note 32, at 301 & n.6.

<sup>48</sup> Notably, the government does rely upon vertical integration to bring core functions, such as police and fire services, in-house. See Fred S. McChesney, *Government Prohibitions on Volunteer Fire Fighting in Nineteenth-Century America: A Property Rights Perspective*, 15 *J. Legal Stud.* 69, 69–70 (1986) (explaining the switch from private to municipal fire-fighters). However, vertical integration is severely limited in its application owing to the diffuse role of government, which requires that at least certain activities be performed by private entities. See Beermann, *supra* note 17, at 1524–25 (explaining that bringing road construction functions in-house likely cannot be justified). However, some work is so specialized, and its need by the government so infrequent, that outsourcing is the only sensible solution. There is an active debate in the literature on the wisdom of privatizing governmental functions. See Alex Kozinski & Andrew Bentz, *Privatization and its Discontents*, 63 *Emory L.J.* 263, 263–65 (2013); Jon D. Michaels, *Privatization’s Progeny*, 101 *Geo. L.J.* 1023, 1025–26 (2013). This Article does not reach the question of whether privatization is appropriate for any particular governmental function, but does assume that at least some functions will be outsourced.

variety of institutional settings.<sup>49</sup> A glaring omission from this literature, however, is an analysis of these various remedies in the context of government procurement. And in the contract-remedies area, the distinctions between government and private buyers are critical.

A number of scholars have assumed—this Article argues incorrectly—that a government buyer can rely upon relational contracts and other alternatives to traditional contract remedies in the same manner and to the same effect as could a private buyer.<sup>50</sup> But, as explained in detail below, government buyers face several limitations on their ability to implement the alternative contract-governance solutions favored by private buyers. As a consequence, the government continues to suffer from poor contractor performance in high-stakes, complex endeavors—where oversight and the availability of effective remedies are most needed.

Of course, not every government contractor will take shortcuts in the absence of credible remedies—to be sure, not every government contract ends in failure. Nor, significantly, do contractual remedies *always* fail to discipline contractors. Some government agents *do* have the expertise required to conduct meaningful contract oversight and desire to do so, and some liquidated damages clauses *do* provide for sufficient damages to deter inefficient breaches. But at the margin, these, along with the extra-legal remedies utilized by the private sector, should be expected to fail, and therefore a more credible remedy is required. This Article proposes CDS as that remedy. Note, however, that CDS need not supplant all other potential contract remedies, such as liquidated damages, performance bonds, and termination-for-convenience clauses. Rather, these

---

<sup>49</sup> See Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. Pa. L. Rev. 1765, 1769–72 (1996) (grain and feed traders); Lisa Bernstein, *Opting out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. Legal Stud. 115, 115–16 (1992) (New York's diamond industry); Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions*, 99 Mich. L. Rev. 1724, 1724–25 (2001) (cotton industry).

<sup>50</sup> See Nicola Doni, *The Importance of Reputation in Awarding Public Contracts*, 77 Annals of Pub. & Cooperative Econ. 401, 404 (2006) (arguing that public agencies should follow the private sector's lead and consider reputation when awarding contracts); Wendy Netter Epstein, *Public-Private Contracting and the Reciprocity Norm*, 64 Am. U. L. Rev. 1, 50–51 (2014) (arguing that governments should rely upon less detailed contracts and the reciprocity norm); William E. Kovacic, *Law, Economics, and the Reinvention of Public Administration: Using Relational Agreement to Reduce the Cost of Procurement Regulation and Other Forms of Government Intervention in the Economy*, 50 Admin. L. Rev. 141, 147–48 (1998) (arguing for an increased role for relational contracts in government procurement).

remedies may be cumulative and can together provide the government with the appropriate remedy for a particular situation.

*B. The Problem with Money Damages*

Unlike private buyers, government buyers ordinarily *do* rely upon contract damages as their primary remedy for poor supplier performance.<sup>51</sup> And yet, for a number of reasons even independent of the above-described problems faced by private buyers, the government cannot reliably utilize contract damages to discipline its suppliers. First, there is a fundamental problem of internalizing monetary costs and benefits. As Professors Daniel Fischel and Alan Sykes explained in their comprehensive article on governmental breaches of contract, the possibility that money damages will be paid out of the public treasury should not be expected to induce the government, and particularly its agents, to make efficient contract-related decisions—after all, it is not the agent’s money at stake.<sup>52</sup> And even assuming perfect alignment between principals and agents, the government by its nature responds primarily to political incentives, not financial incentives. This relative indifference to financial incentives has been recognized with respect to other government functions as well, such as civil-rights liability<sup>53</sup> and eminent domain.<sup>54</sup> At bottom, the prospect of recovering money is alone an insufficient incentive for the government to litigate a breach by a supplier.

---

<sup>51</sup> See Harlan Gotlieb et al., *Government Contract Compliance Handbook* § 16:1 (5th ed. 2014) (summarizing the federal government’s remedies in the event of a breach by the contractor).

<sup>52</sup> See Fischel & Sykes, *supra* note 31, at 336.

<sup>53</sup> Daryl J. Levinson, *Making Governments Pay: Markets, Politics, and the Allocation of Constitutional Costs*, 67 *U. Chi. L. Rev.* 345, 357 (2000) (“Forcing private firms to compensate for harms causes the firm to internalize social costs and weigh them in its decisionmaking calculus. This is true, however, only because private firms in market environments behave more or less like individual wealth-maximizers who attach disutility to financial outflows. Government does not behave like a wealth-maximizer, and therefore does not attach any intrinsic disutility to financial outflows—just as it attaches no intrinsic utility to financial inflows. Rather, government internalizes only *political* incentives.”).

<sup>54</sup> Ronit Levine-Schnur & Gideon Parchomovsky, *Is the Government Fiscally Blind? An Empirical Examination of the Effect of the Compensation Requirement on Eminent Domain Exercises*, 45 *J. Legal Stud.*, (forthcoming 2016) (manuscript at 29–30), <http://ssrn.com/abstract=2621778> [<https://perma.cc/4G85-8VHP>].

Second, and particularly relevant to state and local procurement contracts,<sup>55</sup> government actors have strong political incentives to overlook contractor problems. A local politician will in many cases have selected the contractor, thus any post-award attack on the contractor would be double-edged and call into question that initial judgment of the politician.<sup>56</sup> In addition, the contractor is likely to have political ties to the politician, through lobbyists, donations, etc.,<sup>57</sup> and a politician will hesitate to strain these political connections by alleging poor performance.<sup>58</sup> It is of little wonder, therefore, that governments prefer to terminate contracts quietly and “for convenience,”<sup>59</sup> perhaps even referencing changed circumstances and thanking the contractor for a job well done,<sup>60</sup> rather

<sup>55</sup> A key distinction between federal contracts and state/local contracts in this context is that federal contracts are awarded by the bureaucracy, not by the legislature, whereas state and local contracts are generally awarded by the relevant legislative body. As a result, elected officials are much more involved in the selection of contractors at the state and local level than at the federal level.

<sup>56</sup> See Jon D. Markman, *MTA Subway Tunnel Costs Soaring 44% over Budget*, L.A. Times (Apr. 13, 1996), [http://articles.latimes.com/1996-04-13/local/me-58152\\_1\\_subway-tunnels](http://articles.latimes.com/1996-04-13/local/me-58152_1_subway-tunnels) [<https://perma.cc/H3H4-Q9MX>] (discussing a Metro board member defending contractor for failing project, placing the blame on the contract specifications or the contract manager).

<sup>57</sup> See, e.g., Kyung Hwan Baik, *Winner-Help-Loser Group Formation in Rent-Seeking Contests*, 6 *Econ. & Pol.* 147, 147 (1994) (“Rent seeking is common. Firms compete by hiring lobbyists to acquire a monopoly, rights of ownership to an import quota, or a procurement contract from a government.”); see also Fischel & Sykes, *supra* note 31, at 330 (referencing lobbying expenditures as a “hallmark of rent-seeking behavior”). There is also some empirical support for the causal link between political connections and the award of government contracts. See Pat Akey, *Valuing Changes in Political Networks: Evidence from Campaign Contributions to Close Congressional Elections*, 28 *Rev. Fin. Stud.* 3188, 3214–15 (2015); Eitan Goldman et al., *Politically Connected Boards of Directors and the Allocation of Procurement Contracts*, 17 *Rev. Fin.* 1617, 1618–21 (2013).

<sup>58</sup> See Raphael Lewis & Sean P. Murphy, *Lobbying Translates into Clout*, *Bos. Globe* (Feb. 11, 2003), <http://www.boston.com/globe/metro/packages/bechtel/021103.shtml> [<https://perma.cc/KAW4-FQU3>] (reporting the many political ties between government officials and the lead company for Boston’s “Big Dig” project, including campaign contributions and support, the employment of family members, and lobbying efforts, which collectively enabled the contractor to avoid paying for its mistakes).

<sup>59</sup> Virtually all government contracts permit the government to terminate for convenience, which eliminates the requirement to prove a material breach (no cause is required), but also eliminates the possibility of the government recovering any damages for a breach. See Stephen N. Young, *Note, Limiting the Government’s Ability to Terminate for Its Convenience Following Torncello*, 52 *Geo. Wash. L. Rev.* 892, 892, 895–96 (1984).

<sup>60</sup> See, e.g., David W. Dunlap, *Contract Lost for Trade Center Hub*, *N.Y. Times: City Room* (Apr. 24, 2009, 7:00 AM), <http://cityroom.blogs.nytimes.com/2009/04/24/contract-lost-for-trade-center-hub> [<https://perma.cc/NR8L-WRM9>]. After cost overruns and delays, Port Authority of New York and New Jersey quietly terminated its construction manager for a

than alleging a breach and suing the contractor for damages—whatever the amount potentially collectable.<sup>61</sup>

Furthermore, money damages ordinarily do not fully compensate the relevant victims for the most problematic breaches of a government contract, and the prospect of incomplete damages will not deter all inefficient breaches. For example, if a subway contractor causes the public subway system to be closed for a month, the monetary damages to the government are likely nominal—public subways, at least in the United States, lose money. The cost to the public, however—people who now need an alternate means of getting to work—is astronomic. After the Northridge earthquake destroyed the Santa Monica Freeway in 1994, for example, the cost to the public was calculated at one million dollars for each day that the freeway remained out of commission.<sup>62</sup> Those damages, however, are as a practical matter almost never recoverable.

In theory, the cost to the public of a breach could be quantified and made recoverable through an appropriate liquidated-damages clause. However, even ignoring the obvious judgment-proof problem with respect to damages of that scale, a significant consideration weighing against any effort to make such damages recoverable is that firms will choose not to bid on public projects to begin with if they could be held

---

three-plus billion dollar project by negotiating a modification and issuing a press release with no reference to performance issues. *Id.*

<sup>61</sup> Even when a government does opt to terminate a contract for cause and seeks damages, the time and resources required to litigate the inevitable wrongful-termination counterclaim often lead the government to convert the termination for cause into a termination for convenience. Terminations for cause almost necessarily involve hotly disputed issues, engendering litigation and public debate, and are therefore a far more drastic remedy than a termination for convenience. See Kirsten A. Roe Worley, *Recovery of the Surety's Costs Following Wrongful Termination*, 30 *Construction Law* 40, 41–42 (2010) (explaining that a termination for cause is “generally considered a drastic remedy” that should be utilized only where there are “solid grounds and evidence of material breach”). For example, after the subway sink-hole, Metro terminated its subway contractor for cause and sought monetary damages. See Phernambucq, *supra* note 13, at 1 (“Cost recovery for these Work Package[s] will also be pursued from the terminated B251 contractor and its surety to the fullest legal extent possible.”). Metro and the terminated contractor litigated a series of claims and counterclaims for nearly four years before Metro threw in the towel, agreeing to convert the termination for cause into a termination for convenience, thereby eliminating any possibility of recovering damages. Rabin, *supra* note 2.

<sup>62</sup> Nora Zamichow & Virginia Ellis, *Santa Monica Freeway to Reopen on Tuesday*, L.A. Times (Apr. 6, 1994), [http://articles.latimes.com/1994-04-06/news/mn-42778\\_1\\_santa-monica-freeway](http://articles.latimes.com/1994-04-06/news/mn-42778_1_santa-monica-freeway) [<https://perma.cc/5E7H-6EXC>].

liable for complete damages.<sup>63</sup> In fact, recent procurement reforms have required the exclusion of terms not widely found in commercial contracts in order to entice more firms to bid on government contracts.<sup>64</sup> Thus, the contractor's liability for damages will almost certainly be limited to what is commercially reasonable—that is, not the taxi fares for every subway user for the duration of a subway closure.<sup>65</sup> The stipulated penalties in the reconstruction contract for the Santa Monica Freeway, which is perhaps the high-water mark in government contracting for reliance on liquidated damages, equaled only one-fifth of the calculated total cost to the public for each day of delay.<sup>66</sup>

Of course, money damages are not necessarily an ineffective remedy for breaches of public contracts in every case. Even an inadequate liquidated-damages provision can deter *some* breaches, and the government's aversion to terminating a contractor for cause and relative indifference to the public treasury are not absolute. In fact, in some situations, the government may be more eager than its private counterparts to pursue money damages. When political considerations point towards litigation, such as when a new administration desires to demonstrate a departure from the prior administration's contracting decisions, the government may be inclined to pursue an aggressive litigation strategy even if, as an economic matter, the expected recovery does not justify the litigation costs.<sup>67</sup> However, in the ordinary case, the government is not well situated to rely upon contract damages as the sole means to induce full contractor performance.

---

<sup>63</sup> Even widespread provisions such as the government's right to terminate for convenience have been challenged on this ground—they increase the contractor's risk and therefore increase bid prices and decrease competition. Marc A. Pederson, *Rethinking the Termination for Convenience Clause in Federal Contracts*, 31 *Pub. Cont. L.J.* 83, 92–93 (2001). But see Julie A. Roin, *Public-Private Partnerships and Termination for Convenience Clauses: Time for a Mandate*, 63 *Emory L.J.* 283, 285 (2013) (arguing that termination for convenience clauses should be required in all public-private partnership contracts).

<sup>64</sup> William E. Kovacic, *The Civil False Claims Act as a Deterrent to Participation in Government Procurement Markets*, 6 *Sup. Ct. Econ. Rev.* 201, 201–02 (1998).

<sup>65</sup> However, even partial liquidated damages will deter *some* breaches so long as the threat that the government will collect is a credible one, and the argument here is not that liquidated-damages provisions have no deterrent value whatsoever. They do, but unfortunately not enough to serve as the government's sole remedy.

<sup>66</sup> Zamichow & Ellis, *supra* note 62 (noting that the closed freeway cost the city of Los Angeles \$1 million a day and that a \$200,000-a-day penalty would be assessed for every day the project was completed behind schedule).

<sup>67</sup> See *supra* note 61 and accompanying text (explaining Metro's decision not to pursue contract damages after already expending \$10 million in litigation costs).

*C. The Problem with Vendor Screening and Oversight*

Many of the remedial strategies utilized by private firms rely on screening would-be contractors for risk and, when awarding contracts to higher-priced, lower-risk vendors, aggressively monitoring their vendors after award to ensure the quality of their work. However, government actors face at least three significant hurdles to assessing and managing vendor risks in this manner. These hurdles include regulatory impediments, such as requirements that contracts be awarded to the lowest bidder; nonregulatory, political incentives for the consideration of noneconomic factors; and a lack of the information and technical know-how required to make accurate risk assessments.

As an initial matter, government officials are in many instances legally precluded from making the same types of risk-reducing business judgments relied upon by private buyers. Government procurement is a highly regulated field, and many types of procurement contracts *must* be awarded to the lowest bidder.<sup>68</sup> In a low-bid procurement, the government therefore cannot exercise its business judgment and, for example, trade off price with experience.<sup>69</sup> And although the government can procure certain goods and services using a “best value” formula that can theoretically account for firm risk, discretion is constrained by the scoring formula established in advance. If, for example, the solicitation documents provide that price counts for 50% and experience counts for 50%, the government cannot later choose to award the contract to a vastly more experienced firm that comes up short in the scoring to a vastly

---

<sup>68</sup> See, e.g., N.Y. State Fin. Law § 163(3)(a)(ii) (Consol. 2015) (“Commodities contracts shall be awarded on the basis of lowest price to a responsive and responsible offerer . . . .”); Ga. Code Ann. § 50-5-67(b)(1) (2015) (“Except as otherwise provided for in this part, all contracts for the purchase of supplies, materials, equipment, or services made under this part, other than professional and personal employment services . . . shall, wherever possible, be based upon competitive bids and shall be awarded to the lowest responsible bidder . . . .”).

<sup>69</sup> See, e.g., *City of Sweetwater v. Solo Constr. Corp.*, 823 So. 2d 798, 802–03 (Fla. Dist. Ct. App. 2002) (“The City’s attempt to award the Stormwater Improvement contract to United as the most responsible bidder is . . . contrary to law. An award to a contractor other than the lowest responsible, responsive bidder would unfairly circumvent the intent of competitive bidding standards.”). Although the government can avoid contracting with the lowest bidder if it determines that the bidder is not “responsible” (that is, not qualified to perform the work), responsibility review provides very little flexibility. Formally labeling a firm as “not responsible” is a shot across the bow that raises similar political concerns as suing a contractor for a breach and, as a result, is used in only extreme situations. See Nolan A. Kulbiski, *Another Perspective on Too Big to Debar: BP, the Environmental Protection Agency, and the World Bank*, 41 Pub. Cont. L.J. 967, 968–70 (2012).

underpriced firm. Thus, in every case, procurement regulations limit the government's ability to exercise its business judgment to reduce the risk of poor contractor performance.

Furthermore, even when government officials have discretion to award a contract to a firm other than the lowest bidder, they face strong political incentives to heavily weigh factors that are often inconsistent with risk-reduction strategies. This is particularly true at the state and local level, where contracts are often awarded by elected officials. Although government-contracting decisions have been characterized as the product of successful rent-seeking efforts to the detriment of the public,<sup>70</sup> and corruption is a very real concern in this area,<sup>71</sup> contracting decisions are often aligned with public preferences and further the many noneconomic goals ordinarily pursued by government. In the procurement context, these noneconomic goals include supporting and expanding small, local, and minority-owned businesses.

Public polling data generally reflects popular support for bidder preferences of this nature,<sup>72</sup> which are not in some objective sense "worse" than the business judgments made by private firms—they are simply different.<sup>73</sup> However, from a remedies perspective, these political considerations do hamper the government's ability to make the same sort of business judgments that the private buyers utilize to reduce risk.<sup>74</sup> A local firm, for example, is not likely to be the most experienced, lowest-

---

<sup>70</sup> Fischel & Sykes, *supra* note 31, at 316; Robert M. Hansen, Note, CICA Without Enforcement: How Procurement Officials and Federal Court Decisions are Undercutting Enforcement Provisions of the Competition in Contracting Act, 6 *Geo. Mason L. Rev.* 131, 132–33 (1997).

<sup>71</sup> See Christopher R. Yukins, A Versatile Prism: Assessing Procurement Law Through the Principal-Agent Model, 40 *Pub. Cont. L.J.* 63, 70 (2010) (explaining procurement law's focus on avoiding corruption in the context of principal-agent problems).

<sup>72</sup> For example, a poll conducted by the *Los Angeles Times* in 1995 asked participants whether they supported a set-aside of certain federal contracts for minority-owned businesses, and 49% of those polled were in favor, versus 41% opposed. See L.A. Times Poll, Roper Ctr. for Pub. Op. Research, USLAT.356.R59 (Mar. 1995) (on file with the Virginia Law Review Association). Similarly, another 1995 poll, conducted by Princeton Survey Research Associates, found that 48% of participants supported contract set-asides for minority-owned contractors, versus 44% opposed. See Princeton Survey Research Associates, Roper Ctr. for Pub. Op. Research, USPSRNEW.NW0395.Q9 (Mar. 1995) (on file with the Virginia Law Review Association).

<sup>73</sup> However, others have argued that "wealth redistribution" policies are undesirable in public contracts. See Yukins, *supra* note 71, at 78.

<sup>74</sup> See Pyatt, *supra* note 26, at 328 (outlining the restrictions imposed on government officials when selecting contractors that are not imposed on their private counterparts).

risk provider of a particular good or service when compared to the largest national firms. The remedies relied upon by the government must therefore account for such considerations, and any remedy that requires that the government award contracts only to the most experienced, lowest-risk suppliers does not comport with political realities.

In fact, the government is vulnerable to a fierce political backlash if it fails to account for salient political factors. For example, in 1991, Metro awarded a major contract for automated light-rail vehicles to the Japan-based company Sumitomo.<sup>75</sup> Although Sumitomo's bid was four percent higher than that of its U.S.-based competitor, Sumitomo's product was viewed as more technically sound and Sumitomo had vastly more experience, having delivered over 40,000 similar vehicles versus only 304 for the competition.<sup>76</sup> The experience-for-price tradeoff made by the Metro officials was therefore exactly the type of business judgment often made by private companies to reduce risk.<sup>77</sup> But the public, steeped in the anti-Japan sentiments prevalent in the early 1990s, skewered Metro for it. Metro ultimately was forced, by political pressure, to cancel the Sumitomo contract and rebid the entire project, at great delay and expense.<sup>78</sup> The Sumitomo experience is but one illustration of the reality that the government operates in a political environment—it not only does make political judgments, but it *must* make political judgments in order to retain public support.<sup>79</sup>

---

<sup>75</sup> Elkind, *supra* note 11, at 145–48.

<sup>76</sup> *Id.* at 145.

<sup>77</sup> See Bernstein, *supra* note 37, at 591–92.

<sup>78</sup> After cancelling the contract, Metro was in need of a stop-gap order and settled with Sumitomo to supply fifteen cars at more than twice the price per car than for a bulk order. In July 1993—nineteen months after the initial award—Germany-based Siemens was ultimately awarded a contract for the driverless cars. Mark A. Stein, Metro Green Line Contracts Approved by a Doubting Board, L.A. Times (Dec. 17, 1991), [http://articles.latimes.com/1991-12-17/local/me-638\\_1\\_green-line](http://articles.latimes.com/1991-12-17/local/me-638_1_green-line) [<https://perma.cc/Q3W6-DTLK>]; Mark A. Stein, County to Buy 15 Rail Cars from Sumitomo, L.A. Times (Oct. 6, 1992), [http://articles.latimes.com/1992-10-06/news/mn-482\\_1\\_green-line](http://articles.latimes.com/1992-10-06/news/mn-482_1_green-line) [<https://perma.cc/AHE6-GPZH>]; Nora Zamichow, German-U.S. Team to Build Green Line Cars, L.A. Times (July 29, 1993), [http://articles.latimes.com/1993-07-29/local/me-18147\\_1\\_green-line](http://articles.latimes.com/1993-07-29/local/me-18147_1_green-line) [<https://perma.cc/G6KT-UDYB>].

<sup>79</sup> Some political contracting judgments have no social value, such as those based on nepotism or cronyism. But others, such as favoring local suppliers, can benefit the public. The point is not that political decision making for public contracts is unequivocally “bad,” but merely that it stands in the way of one of the strategies employed by private firms to achieve full vendor performance, much in the same way that competitive-bidding requirements may be justified and yet stand in the way of other methods favored by private firms, such as indefinite-term, relational agreements. This Article therefore does not assert that political

Governments also face critical institutional barriers to accurately assessing risk or effectively monitoring vendors. A government ordinarily hires contractors to perform work that it lacks the expertise to perform in-house (such as building a subway). Accordingly, government evaluators often lack the experience and technical background required to accurately assess the risks associated with a particular firm.<sup>80</sup> For this reason, the government is equally poorly suited to engage in post award oversight of its contractors: The government cannot effectively oversee what it knows little about.<sup>81</sup> Significantly, this lack of experience is compounded by a lack of resources. The same budgetary pressures that lead the government to outsource more work to private vendors also result in fewer government staff available to investigate and manage those vendors.<sup>82</sup>

Beyond a dearth of expertise, government buyers also face a dearth of information related to the risk of a particular vendor. As an initial matter, because governments prefer not to advertise the failures of their vendors, relevant information is not often readily available. Further, background checks are often conducted pursuant to a bare-bones, “check the box” methodology, in many cases relying primarily on the representations made by the prospective vendors,<sup>83</sup> and procurement officials

---

judgments should be avoided, but rather that they must be accounted for when crafting an appropriate contract remedy.

<sup>80</sup> See Marshall et al., *supra* note 39, at 7–8 (explaining that “government buyers are often not well informed about the product that they are buying”).

<sup>81</sup> Many governmental purchases are so infrequent that the government has no opportunity to develop an expertise, even from a managerial standpoint. Whereas an electronics manufacturer may develop an expertise in batteries, at least to the extent required to effectively manage its suppliers, a municipality has neither reason nor opportunity to develop an in-house expertise in subway tunneling or other large-scale, once-a-generation projects.

<sup>82</sup> See Janice Fine, *State Oversight of Hurricane Sandy: Some Problems and Questions*, Report Submitted to the Subcommittee on Housing, Transportation, and Community Development of the Senate Committee, on Banking, Housing, and Urban Affairs 1 (Mar. 12, 2014), [http://www.banking.senate.gov/public/\\_cache/files/ef0edc91-f0f7-46f5-87ec-fe92c9029485/23C6AE00CC53D93492511CC744028B5E.finetestimony31214htcd.pdf](http://www.banking.senate.gov/public/_cache/files/ef0edc91-f0f7-46f5-87ec-fe92c9029485/23C6AE00CC53D93492511CC744028B5E.finetestimony31214htcd.pdf) [<https://perma.cc/45HJ-P2QH>]; Marshall et al., *supra* note 39, at 15 (noting that procurement offices often suffer from lack of resources).

<sup>83</sup> See, e.g., Office of the State of N.Y. Comptroller, *Guide to Financial Operations* § XI.16 (2016), [https://www.osc.state.ny.us/agencies/guide/MyWebHelp/#XI/16.htm%3FTocPath%3DXI.%20Procurement%20and%20Contract%20Management%7C\\_\\_\\_\\_16](https://www.osc.state.ny.us/agencies/guide/MyWebHelp/#XI/16.htm%3FTocPath%3DXI.%20Procurement%20and%20Contract%20Management%7C____16) (explaining that an agency “must consider any information that has come to their attention from the proposed contractor or any other source that would raise issues concerning the proposed contractor’s responsibility,” but imposing no duty to research additional information). For an example of a vendor responsibility questionnaire used by New York state agencies, see N.Y.

have little incentive to dig any deeper, thereby hampering the collection of the information that is needed to perform a sound risk assessment. For example, a report by the New York State Comptroller on vendor responsibility reflects many poor contracting decisions by state agencies after failing to conduct adequate background checks,<sup>84</sup> such as awarding dozens of contracts to a firm that had previously bribed government officials to cover up its substandard work—information that was readily available in the public record prior to the agency’s contract-award decision, but was nonetheless not discovered by the procurement officials.<sup>85</sup>

These failures are in part due to a lack of resources, as explained above, and in part because the government’s agents lack incentives to aggressively investigate or oversee vendors on the government’s behalf.<sup>86</sup> Federal and subnational governments alike have highly restrained opportunities to reward their agents for exceptional efforts put into ferreting out and resolving problems with a complex contract. At the same time, the government’s contract managers are prone to regulatory capture by the private contractor, which—from the contractor’s perspective—can reward a government agent for a job well done.<sup>87</sup> The prospect of future employment opportunities with a private contractor, for example, may lead a government contract manager to intentionally undermanage the contract.<sup>88</sup> However, even assuming away corruption of this nature, the government lacks the incentives, expertise, resources, and information required to engage in the risk-reduction and risk-mitigation strategies relied upon by the private sector.

---

State, Vendor Responsibility Questionnaire: For-Profit Business Entity, AC 3290-S (2013), <http://www.osc.state.ny.us/vendrep/documents/questionnaire/ac3290s.pdf> [https://perma.cc/TR7T-3AL3].

<sup>84</sup> New York is an outlier in that the state Comptroller independently reviews all proposed state-agency contracts over a threshold amount and is empowered to withhold funding of the contract if it determines that the agency failed to adequately assess the vendor’s qualifications. See Office of the State of N.Y. Comptroller, *State Contracts by the Numbers: Longstanding Contract Oversight Authority Serves Taxpayers* (2014), [https://osc.state.ny.us/reports/procurement/state\\_contracts\\_by\\_numbers\\_jan2014.pdf](https://osc.state.ny.us/reports/procurement/state_contracts_by_numbers_jan2014.pdf) [https://perma.cc/6S8B-2BGJ]. New York agencies should therefore be expected to perform *better* than other states in this area.

<sup>85</sup> Office of the State of N.Y. Comptroller, *Vendor Responsibility* 3, 25 (2006), <http://www.osc.state.ny.us/reports/other/vendorresponsibility306.pdf> [https://perma.cc/M8MK-LNU2].

<sup>86</sup> See Epstein, *supra* note 18, at 2250 (explaining that government generally undermonitors its contractors).

<sup>87</sup> Leitzel, *supra* note 25, at 50–51.

<sup>88</sup> See Fischel & Sykes, *supra* note 31, at 326–27.

*D. The Problem with Relational Contracts*

In the world of private-sector procurement, relational contracts—which are generally less formal and rigid than traditional contracts and rely upon ongoing relationships between buyer and seller to define and induce full performance—have become commonplace.<sup>89</sup> Relational contracts therefore have some intuitive appeal for government procurement contracts, but because the government operates in a very different regulatory, institutional, and political environment than a private buyer, what works for private buyers cannot be assumed to work for government buyers. And in fact, despite their proliferation in the private sector, relational contracts are particularly ill-suited for the government context.

A threshold problem is that the regulatory environment is hostile to the ongoing relationships that are at the heart of relational contracts. Governments are almost always required to award contracts competitively and for limited terms. These core competitive-bidding requirements impede the development of good, long-term relationships between the government and its vendors.<sup>90</sup> Whereas a private buyer can reward a vendor for good performance by extending an agreement indefinitely, a government buyer must permit the vendor's competitors to freely compete for the work after the predetermined term has expired. Because there can be no assumption that the vendor will be able to keep the contract for subsequent terms, neither party has strong incentives to make relationship-specific investments. Similarly, commonplace regulations prohibiting gifts and other activities that could be perceived as favoritism can create an imposing barrier to personal relationships between the government and its vendors for fear of running afoul of the law.<sup>91</sup>

---

<sup>89</sup> See *supra* notes 31–33 and accompanying text.

<sup>90</sup> Norman R. Augustine & Robert F. Trimble, *Procurement Competition at Work: The Manufacturer's Experience*, 6 *Yale J. on Reg.* 333, 340–41 (1989) (explaining that frequent competitions and low-bidder awards disrupt the formation of beneficial relationships between vendors and buyers).

<sup>91</sup> Jessica Tillipman, *Gifts, Hospitality & the Government Contractor 1* (The George Washington Univ. Law Sch. Pub. L. & Legal Theory Paper No. 2014-35, 2014), <http://ssrn.com/abstract=2467247> [<https://perma.cc/94XC-L4TW>] (“While gifts and hospitality play an important role in facilitating and strengthening business relationships in the private sector, in the public sector, common business courtesies may appear as an attempt to influence a government official and the procurement process.”). Prohibitions of this nature are commonplace at both the federal and local level. See Sandeep Kathuria, *Best Practices for Compliance with the New Government Contractor Compliance and Ethics Rules Under the Federal Acquisition Regulation*, 38 *Pub. Cont. L.J.* 803, 808–09 (2009) (summarizing federal procurement-integrity rules and explaining that “contractors and their agents may not provide

Of course, regulations can always be changed. Indeed, some scholars have proposed such changes in order to facilitate the implementation of relational contracts.<sup>92</sup> However, regulatory impediments do not exist in a vacuum and are animated by political realities that similarly impede relational contracts—with or without the accompanying regulations.<sup>93</sup> Public officials desire to award contracts in a manner that avoids or minimizes scrutiny from political rivals, competing contractors, the media, and other groups; that is, in a manner that requires the least amount of political capital.<sup>94</sup> On a political battlefield, a relational contract is toxic: an agreement to pay an indefinite amount of money to a private contractor to do indefinite work for an indefinite period of time. Therefore, due to the possibility of political blowback alone, relational contracting is not a viable option for public contracts.<sup>95</sup> Government actors are well aware of the political risks associated with contract terms that appear too generous to the contractor and therefore prefer traditional, rigid contracts that provide protection from political attack.<sup>96</sup>

Even if a relational contract could be dressed up with sufficient formalities to pass both legal and political muster, a more fundamental problem with relational contracts is that the government cannot utilize reputation effectively to manage its contractors. As explained in Section II.B above, governments frequently elect not to advertise the failures of

---

entertainment or gifts to public officials to obtain favorable treatment under a contract”); see, e.g., Miami-Dade County, Fla. Code of Ordinances § 2-11.1(e) (2016).

<sup>92</sup> Kovacic, supra note 50, at 143 (explaining that the “existing scheme of procurement regulation discourages the use of relational understandings between the government and its suppliers to reduce the adverse effects of imperfect statutory and regulatory commands”).

<sup>93</sup> Furthermore, many of the regulatory requirements impeding relational contracts are generally sound, helping to cure the more sinister problem of insider and purely political deal making. See, e.g., *Wester v. Belote*, 138 So. 721, 724 (Fla. 1931) (explaining that public-procurement regulations were adopted because of a “distrust of public officers whose duty it is to make public contracts,” and they serve to “protect[] the public against collusive contracts” and “secure fair competition upon equal terms to all bidders”).

<sup>94</sup> See Marian W. Moszoro & Pablo T. Spiller, *Third-Party Opportunism and the Theory of Public Contracts: Operationalization and Applications*, in *The Manufacturing of Markets: Legal, Political, and Economic Dynamics* 229, 229–30, 233–39 (Eric Brousseau & Jean-Michel Glachant eds., 2014) (explaining that governments favor rigid contracts to minimize political scrutiny).

<sup>95</sup> See Fischel & Sykes, supra note 31, at 334 (arguing that long-term contracts should be viewed with more suspicion as potentially harmful rent-seeking deals).

<sup>96</sup> There is a new and growing literature evidencing a direct, causal relationship between the rigidity of public contracts and political contestability. See Moszoro & Spiller, supra note 94, at 229–30 (explaining that higher rigidity in public contracts can be understood as a political risk adaptation by public agents).

their contractors,<sup>97</sup> thereby depriving other governments of what would be relevant reputational information. Although poor contractor performance occasionally results in media coverage that can be later discovered,<sup>98</sup> most performance problems are not documented in the public record in this manner and would not be revealed, for example, through an ordinary Google search. As a result, governments infrequently have reliable, usable information on a contractor's past performance issues.<sup>99</sup>

Second, whatever useful reputational information that might exist is underutilized. As explained above, the government's agents have no incentive to expend extra effort to uncover damaging information on any potential vendor. Thus, even if such information exists, it is not likely to be found. Furthermore, even where reliable information on a contractor's reputation is available to the government, procurement officers are often hesitant to use such information for fear of bid protests from the slighted firm,<sup>100</sup> which might, for example, impugn the integrity of the

---

<sup>97</sup> A government agent could, of course, convey useful performance information about a current or former contractor "off the record" in response to an inquiry from another agency. But it isn't clear what incentive the agent would have to do so, and in any case, the recipient agency cannot lawfully act on unverifiable, secret information outside of the procurement record. See, e.g., *Solers, Inc.*, B-404032, at 14 (Comp. Gen. Apr. 6, 2011) (sustaining bid protest where agency relied on past-performance information asserted to have been provided by references, but that was not verifiable by contemporaneous record evidence of the reference interviews).

<sup>98</sup> Contractor misbehavior that results in major accidents and injuries often receives significant coverage in the media. BP, for example, cannot hide from its misconduct that led to the Deepwater Horizon Disaster and resulting oil spill in the Gulf of Mexico. See Daniel Gilbert & Justin Scheck, *BP Is Found Grossly Negligent in Deepwater Horizon Disaster*, *Wall St. J.* (Sept. 4, 2014), <http://on.wsj.com/1qzWJo1>.

<sup>99</sup> A recent study by the U.S. Government Accountability Office found that, even where the solicitation emphasized past performance as an evaluation criterion, past performance was only rarely considered by the procuring agency, and the officials interviewed explained that the major impediments to a consideration of past performance were lack of an ability to verify the objectivity of the information or properly assess its relevance. U.S. Gov't Accountability Office, *GAO 09-374, Federal Contractors: Better Performance Information Needed to Support Agency Contract Award Decisions 2-3* (2009), <http://www.gao.gov/new.items/d09374.pdf> [<https://perma.cc/7M4D-5N7X>]; see also, e.g., Susan Spencer, *Contractor Racks Up Failed Projects but Carries On*, *Worcester Telegram & Gazette* (Worcester, Mass.) (Aug. 22, 2014), <http://www.telegram.com/article/20140727/news/307279930> [<https://perma.cc/2JYH-LTBT>] (explaining how a government contractor with a long history of failed contracts avoided reporting obligations when bidding for new contracts by negotiating its past terminations as terminations for convenience).

<sup>100</sup> Marshall et al., *supra* note 39, at 63-64. At a minimum, a bid protest requires that the procurement officer undertake substantial additional work to defend his actions and the government's recommendation, including preparing the record for hearing, being deposed, and testifying at hearings. Further, if the protester prevails in its bid protest, the procurement of-

procurement officer that uncovered the information.<sup>101</sup> The government is thus unlikely to make any real threat to damage its contractor's reputation in response to poor performance. Accordingly, even ignoring regulatory and political obstacles, the informal, reputation-based relational arrangements utilized by private firms cannot effectively translate to government contracts.

## II. COMPETITIVE DUAL SOURCING AS CONTRACT ENFORCEMENT

### A. *Competitive Dual Sourcing Explained*

Dual sourcing is the practice of hiring two vendors rather than one ("single sourcing") to provide a good or service.<sup>102</sup> If the government needs to purchase 1,000 ball-point pens, it may either purchase all 1,000 pens from Company A (i.e., single sourcing) or 500 pens from each of Company A and Company B (i.e., dual sourcing). Simply, dual sourcing is the practice of dividing a contract between two firms. The contract could, of course, be divided amongst three firms, or four firms, or  $n$  firms, which would all constitute "multiple sourcing." But because the analysis in this Article does not depend on whether two or a greater number of firms are utilized,<sup>103</sup> for simplicity's sake, the focus will remain on dual sourcing.

---

ficier will most likely be required to repeat portions of the process, which further militates against any actions that are likely to spur a protest. For more discussion on procurement officers' incentives, see *infra* Section III.A.

<sup>101</sup> See, e.g., *Athena Sci. Corp.*, B-409486, at 1–2 (Comp. Gen. May 14, 2014) (denying protest from losing bidder accusing agency officials of bias for considering litigation filed against the protester).

<sup>102</sup> This Article uses the term "single sourcing" to generally describe the practice of procuring a single vendor as to avoid confusion with "sole sourcing," which is used to describe both the practice of hiring only a sole vendor and also the practice of hiring a sole vendor without any competitive process with the justification that the vendor is the only supplier of the good being procured (i.e., the "sole source"), and a competitive process would serve no purpose. See FAR 6.302-1 (2014) (exempting procurements from competitive requirements where only one capable source exists.).

<sup>103</sup> There may well be situations where splitting a contract between three or more firms would be preferable to dual sourcing. For example, adding another firm could reduce the opportunity for collusion between the firms and also ensure competition in the event that one contractor is terminated completely. See *infra* note 198 and accompanying text. Weighing against adding more firms are factors such as quality tradeoffs (e.g., there may be eight firms willing to perform a given scope of services, but some may be substantially more qualified than the others) and increased transactional and coordination costs.

Although dual sourcing can in some cases reduce initial acquisition costs, its greatest potential benefit is as a remedial strategy, particularly for high-stakes contracts where the government otherwise lacks an adequate remedy—the situations where, as opposed to ordinary supply contracts,<sup>104</sup> dual sourcing is generally *not* used.<sup>105</sup> Significantly, dual contracts can be structured to improve contractor performance and, if a contractor fails, reduce the cost to the government of that failure.<sup>106</sup> In order to achieve these benefits, well-designed dual contracts need to include options for the shifting of work from one firm to the other, as opposed to a fixed division of responsibility between the two firms. If the government is procuring 1,000 ball-point pens, for example, the dual contracts would procure 500 pens from Company A and 500 pens from Company B, and importantly, include provisions permitting the reassignment of all or portions of A's order to B if A's pens are not received by a certain date, and vice versa. It is the inclusion of reassignment options that permits the government to obtain the full benefits of competition among the two firms and is what this Article refers to as “competitive dual sourcing” or “CDS.”

CDS reduces the costs of switching from one contractor to another. Ordinarily, after a vendor has been terminated, the government must go through the many time-consuming, highly regulated steps required for a procurement, including market research, drafting a solicitation, permitting interested parties sufficient time to prepare a bid, evaluating bids, and negotiating and formally awarding a contract. With reassignable dual contracts, however, the government need only terminate one contract and expand the scope of the other, which can be accomplished either

---

<sup>104</sup> The federal procurement regulations do encourage multiple sourcing for particular types of recurring supply contracts, but not if the contracting officer anticipates that the acquisition price would be lower if only a single award is made. FAR 16.504(c)(1)(ii)(B)(2) (2014) (“The contracting officer must not use the multiple award approach if . . . [b]ased on the contracting officer’s knowledge of the market, more favorable terms and conditions, including pricing, will be provided if a single award is made[.]”). Essentially, if the good can be acquired less expensively from two firms than one, dual source. Otherwise, single-source.

<sup>105</sup> Burnett & Kovacic, *supra* note 20, at 294 (noting that the Department of Defense seldom considers noncost benefits of dual sourcing). But see Lyon, *supra* note 19, at 247 (finding that procurement officials do not opt to dual source based solely on acquisition cost, but rather are more likely to consider past quality control problems as well). There is therefore evidence that procurement officials do consider performance issues as a justification for dual sourcing, but the regulations nonetheless remain an impediment to its utilization.

<sup>106</sup> Burnett & Kovacic, *supra* note 20, at 293–94 (explaining that dual sourcing insures against the risk of failure of one contractor).

administratively or through a single legislative action, depending on the terms of the contracts and the legal requirements of the particular jurisdiction.

This reduction in switching costs can improve contractor discipline by providing the government with a credible termination threat where none would otherwise exist. Simply, private contractors prefer to keep and profit from their government contracts and can therefore be motivated by a genuine threat of being terminated and replaced by a competitor.<sup>107</sup> These remedial benefits of dual sourcing appear to have been recognized by government procurement officials: An empirical study of U.S. Air Force engine contracts revealed that dual-sourced contracts were less complete than single-sourced alternatives, suggesting that dual sourcing was in practice utilized as an alternative remedial mechanism, notwithstanding the regulatory focus on acquisition cost.<sup>108</sup>

Additional benefits flow from the reduced switching costs provided by CDS. Under ordinary circumstances, the delays and expenses associated with switching from one vendor to another create a hold-up problem, hindering the government's willingness to enforce a contract aggressively and enabling a vendor to extract concessions from the government through favorable change orders and other contract amendments.<sup>109</sup> Predictably, one-sided contract modifications favoring the vendor are common in this setting.<sup>110</sup> By reducing switching costs, CDS can mitigate or eliminate this hold-up problem.

---

<sup>107</sup> Michaels, *supra* note 48, at 1030 (“At the organizational level, contracting firms are moved by profits and by the threat of ouster—that is, of being replaced by a more responsive, responsible competitor. Simply stated, they want to win (and keep) contracts and thus are driven to perform exceptionally well.”).

<sup>108</sup> See Keith J. Crocker & Kenneth J. Reynolds, *The Efficiency of Incomplete Contracts: An Empirical Analysis of Air Force Engine Procurement*, 24 *RAND J. Econ.* 126, 145 (1993).

<sup>109</sup> This dynamic is akin to the “hold-up” problem in nonsimultaneous exchanges where the first-mover is vulnerable to renegotiations if she has already expended resources and the other party is aware of these expenditures. See Fischel & Sykes, *supra* note 31, at 322. In government contracting, the government's reliance expenditure is the costly procurement process.

<sup>110</sup> In the ongoing, multibillion-dollar Second Avenue Subway project in New York City, for example, all three completed contracts have involved change orders equal or nearly equal to the entire contingency budget—the contractors won their contracts by submitting the lowest, below-budget bids, yet through negotiated change orders, collected the entire budgeted amounts. See Metro. Transit Auth. Capital Construction, *Quarterly Report: Second Avenue Subway Phase 1, 4th Quarter 2013*, at 40–43 (2013), [http://web.mta.info/capital/sas\\_docs/Second%20Avenue%20Subway-%20Quarterly%20Report%202013%20Q4.pdf](http://web.mta.info/capital/sas_docs/Second%20Avenue%20Subway-%20Quarterly%20Report%202013%20Q4.pdf)

CDS can also improve contract performance and oversight. By reserving a portion of the work for the better-performing vendor or retaining the ability to easily transfer a portion of the work from one vendor to the other, both vendors have an incentive to perform at their best, as opposed to merely good enough to retain a single-sourced contract. In addition, because a vendor's ability to obtain the benefits of superior performance depends upon the government's recognition of that advantage, each vendor has an incentive to spy on its rival and report its findings to the relevant decision makers. In single-source procurements, vendors frequently investigate and report their rivals' shortcomings to influence the award decision,<sup>111</sup> and a firm's incentive for doing so (being awarded a contract) extends to the contract-performance stage in a CDS procurement.<sup>112</sup> Private oversight by competing firms can reduce the government's cost to perform this oversight function. For example, the Petronas Twin Towers in Malaysia were built by two competing firms pursuant to two government construction contracts. Those contracts expressly provided for a time period each week where members of each firm, along with government inspectors, would be permitted to access and evaluate the work of its competitor.<sup>113</sup>

---

[<https://perma.cc/9BNZ-KUED>] (Contract No. C-26002 contractor received change orders equal to 12% of its bid, leaving no contingency fund; Contract No. C-26013 contractor received change orders equal to 19% of its bid, leaving \$37,490 in the contingency fund; Contract No. C-26005 contractor received change orders equal to 14% of its bid, leaving \$3.9 million in the contingency fund). Of course, these change orders could reflect fair prices for required, additional work. But that the prices, determined without competition, equal the entire predetermined contingency budgets for every contract merits some suspicion. See also Roin, *supra* note 63, at 295–96, 299–300 (noting that the absence of a low-cost termination threat increases the costs to the government of renegotiations and explaining this dynamic in the context of the Chicago parking-meter contract, where the contractor was able to hold up the City for increased revenues). This anecdotal evidence is consistent with empirical evidence, such as Guasch's exhaustive studies of more than 1,000 Latin American concession contracts, which revealed that the vast majority of these contracts were negotiated shortly after execution, with many of the renegotiations initiated by the private contractor to increase its price. See J. Luis Guasch & Stéphane Straub, *Renegotiation of Infrastructure Concessions: An Overview*, 77 *Annals of Pub. & Cooperative Econ.* 479, 483–84 (2006).

<sup>111</sup> See, e.g., *Bid Protest/Appeal of Calstate Construction, Inc. Regarding Fire Station #3 Project No. PWC 8552B* (Apr. 29, 2010), <http://www.fremont.gov/DocumentCenter/Home/View/3623> [<https://perma.cc/UZT6-LCYK>] (alerting government agency to low bidder's lack of relevant licenses).

<sup>112</sup> For an analysis of the factors to be considered when determining how much of a contract to shift from one vendor to another, see *infra* Subsection II.B.6.

<sup>113</sup> Spiro Pollalis, Harvard Design Sch. Ctr. for Design Informatics, *The Petronas Towers, Kuala Lumpur, Malaysia: International Cooperation and Information Transfer in the Realiza-*

*B. Variations*

Dual sourcing is simplest to envision when the government's underlying purchase is for a discrete number of identical goods: 1,000 ball-point pens, 10 police cars, 500 bags of fertilizer, and so on. When the good is inherently divisible, dividing the contract among two sources requires little imagination. It is therefore unsurprising that, to the extent dual sourcing is implemented today, it is often for bulk purchases of this nature. However, a contract can be divided in any number of ways, and nearly any good or service can be dual-sourced.<sup>114</sup>

*1. Geographic Division*

When two firms are hired to perform the same service, a clear division of scope is often desirable. For example, if two fire trucks both race to every fire, there is a risk that each will get in the other's way, thus hampering the efforts of both. And with both trucks focused on the same fire, neither will be available to handle the fire that subsequently breaks out across town. Worse, if the stakes for fighting any particular fire are high enough, the two rivals may expend resources attempting to stymie the other, very much to the detriment of the owners of burning buildings.<sup>115</sup> To avoid this coordination problem, governments often establish a clear-cut division of responsibility by granting geographic monopolies for firefighting, ambulance, and similar services when provided by the private sector.<sup>116</sup>

Although a monopoly necessarily reduces competition, a geographic monopoly need not cover an entire jurisdiction, and contracts can be designed to facilitate an appropriate level of ongoing competition in order

---

tion of the World's Tallest Buildings 23 (2002), [http://isites.harvard.edu/fs/docs/icb.topic30774.files/2-8\\_Petronas.pdf](http://isites.harvard.edu/fs/docs/icb.topic30774.files/2-8_Petronas.pdf) [<https://perma.cc/44JS-JWT2>].

<sup>114</sup> In some cases, the work need not be divided at all. One method of accomplishing dual sourcing is by duplication—hiring two vendors to perform the same scope of work. For professional services such as legal services, the same work can be performed in parallel, and for critical projects, such redundancy may even be a primary goal of dual sourcing. Even where true redundancy is not possible or desirable, the firms may be able to self-coordinate.

<sup>115</sup> This used to happen with some frequency. McChesney, *supra* note 48, at 77–78 (explaining the frequently violent battles between rival private firefighting clubs attempting to extinguish the same fires in the absence of geographic divisions of responsibility).

<sup>116</sup> See, e.g., Cal. Health & Safety Code § 1797.224 (2010) (authorizing the creation of “exclusive operating areas” for ambulatory services); cf. McChesney, *supra* note 48, at 80 (explaining that geographic private monopolies could have been utilized as an alternative to the municipalization of firefighting services).

to preserve the benefits of CDS. By dividing the relevant jurisdiction into discrete regions, a contract for jurisdiction-wide services can be split amongst multiple contractors. The government can foster competition amongst the multiple contractors by retaining the ability, via contract, to terminate one contractor and assign its territory to the other. Significantly, a geographic division of this nature can be designed not only to avoid coordination problems, but also to help mitigate the lack of political accountability often associated with the outsourcing of public services. For example, if a service contract is divided into the same geographic regions used to elect members of the city council, then political accountability can be increased, perhaps even as compared to the unified, publicly provided alternative.

An actual example of CDS with geographic division is New York City's procurement for home-reconstruction services after Hurricane Sandy. There, the City divided its territory into twelve regions and selected a contractor for each, thereby granting each selected vendor a geographic monopoly for construction services in its particular region. However, each regional contract required the completion of any work located in a *different region* if assigned to the contractor by the City.<sup>117</sup> The resulting framework provided the City with the flexibility to terminate and quickly replace a poorly performing contractor by dividing its territory among any of the remaining contractors—eliminating the costs and delays that ordinarily would accompany the procurement of a replacement contractor. Consequently, each contractor has the incentive to perform to a high standard (so as to not be terminated) and with gusto (to ensure availability to accept additional assignments in other jurisdictions).<sup>118</sup>

---

<sup>117</sup> NYC Dep't of Envtl. Prot., Construction Contract, NYC Houses Rehabilitation Program: Information for Bidders 4, § 1 (2013), <http://www.nyc.gov/html/recovery/downloads/pdf/invite-hro-jocs.pdf> [https://perma.cc/9YZJ-TPAB].

<sup>118</sup> Unfortunately, due to the failure of another contractor (which was single-sourced), applications for relief were not processed in a timely fashion, thus delaying commencement of construction. However, once funds began flowing and work orders were assigned to the multiple construction contractors, the City's housing-reconstruction program progressed quickly. See Russ Buettner & David W. Chen, Hurricane Sandy Recovery Program in New York City Was Mired by Its Design, N.Y. Times (Sept. 4, 2014), [http://www.nytimes.com/2014/09/05/nyregion/after-hurricane-sandy-a-rebuilding-program-is-hindered-by-its-own-construction.html?\\_r=0](http://www.nytimes.com/2014/09/05/nyregion/after-hurricane-sandy-a-rebuilding-program-is-hindered-by-its-own-construction.html?_r=0) [https://perma.cc/A25P-EXUF].

*2. Operational Division: New York Subway*

For continuous, interrelated goods and services, such as a transportation system, geographic divisions may themselves result in intense coordination problems and prove unworkable. However, alternative divisions may be used. A rail system, for example, could be divided based on discrete routes. Transit routes may cover the same geographic areas, yet be constructed and operated independently, thereby providing an effective means of dividing the system between two contractors. Indeed, there is precedent for such a division. The bulk of the New York Subway system was constructed pursuant to the “Dual Contracts” entered into in 1913 between the City and two different firms, the Interborough Rapid Transit Company (“IRT”) and the Brooklyn Rapid Transit Company (“BRT”).<sup>119</sup> The build-out of the New York Subway pursuant to the Dual Contracts remains one of the most significant construction projects in U.S. history.<sup>120</sup>

Under the Dual Contracts, the subway system was divided by line, not by geography. Indeed, a fundamental goal of the Dual Contracts was to break up the geographic monopolies previously enjoyed by the two companies (IRT in Manhattan and BRT in Brooklyn) in order to create ongoing competition.<sup>121</sup> The expansion of the subway system, which was centrally planned by the City, was divided between BRT and IRT in a way that ensured both firms built and operated independent lines that traversed multiple boroughs. BRT, for example, was awarded the Broadway line (now the N, Q, R), which runs through Brooklyn, into downtown Manhattan, north into midtown Manhattan, and then east into Queens. IRT, on the other hand, was awarded what are now the 4, 5, 6, and 7 lines, which together cover essentially the same territory as BRT’s Broadway line: Brooklyn, Downtown, Midtown, and east into Queens.<sup>122</sup>

---

<sup>119</sup> Metro. Transit Auth., *Celebrating 100 Years of the BMT* (2015), <http://web.mta.info/nyct/100BMT/> [<https://perma.cc/8TAA-UBFX>]. BRT later became the Brooklyn-Manhattan Transit Corporation, often referred to as “BMT.” *Id.*

<sup>120</sup> The Dual System cost approximately \$366 million. Peter Derrick, *Tunneling to the Future 228* (2001). In comparison, the Panama Canal was completed at a cost of \$352 million. See Bob Cullen, *Panama Rises*, *Smithsonian Magazine* (Mar. 2004), <http://www.smithsonianmag.com/travel/panama-rises-103406780/?no-ist> [<https://perma.cc/D3DE-QDWB>].

<sup>121</sup> See Derrick, *supra* note 120, at 79.

<sup>122</sup> See *id.* at 177, map 6c.

The division of the New York Subway by line yielded many benefits to the City that would not have been possible had a single contractor instead been selected to construct the entire system. First, acquisition costs were reduced, as the City was able to negotiate a more favorable deal with each firm by threatening to grant a larger share of the pie (or the entire pie) to the competing firm.<sup>123</sup> This was a credible threat, as the City achieved valuable concessions from both firms, as compared to their initial proposals submitted under a single-contractor framework.<sup>124</sup> In stark contrast, the City's prior threats to either build the subway itself, or not at all, were not seen as credible and IRT in particular steadfastly held out until the City would agree to its terms (including a guaranteed return and a continued Manhattan monopoly).<sup>125</sup> IRT retreated from this position only when the City's alternative moved from a City subway (which IRT reasonably believed it could stymie politically) to a BRT-exclusive subway.<sup>126</sup> As a result of the dual-sourcing approach, the City therefore gained valuable leverage during the negotiations phase of its procurement, which is consistent with other implementations of dual sourcing.<sup>127</sup>

In addition to negotiating more favorable terms at the outset, the Dual Contracts created incentives for both firms to meet those terms and reduced the cost to the City of a default by either firm. The structure of separately operated and geographically overlapping lines reduced the risk and the cost of construction delays—if one firm suffered delays, the territory would still be covered by the competing firm. Incredibly, despite the complexity of the construction and the unanticipated diversion of resources to the new war effort in Europe, the new lines were constructed with remarkable speed.<sup>128</sup> In addition, after the completion of construction, during the operations phase, the ability of patrons to

---

<sup>123</sup> See *id.* at 181.

<sup>124</sup> See *id.* at 168–69, 189–90.

<sup>125</sup> *Id.*

<sup>126</sup> See *id.* at 133–34, 181, 194. In brief, IRT gained control of Mayor Gaynor early in the negotiation process, effectively ending the threat of an independent, city-operated subway. Once BRT entered the fray, and awarding the entire system to BRT gained traction as an alternative, IRT relaxed its position.

<sup>127</sup> Pyatt, *supra* note 26, at 324.

<sup>128</sup> D.L. Turner, *Six Years of Rapid-Transit Progress in New York*, 82 *Engineering News-Rec.* 865, 865 (1919). There were a few BRT lines that were substantially delayed due to a change in local politics—Mayor Hylan, who was elected in 1918 and opposed private subway control, did not approve any construction contracts for the Dual System. Derrick, *supra* note 120, at 233.

choose the lines of either operator and switch inexpensively from one to the other incentivized both firms, through real, ongoing competition, to perform at their best.<sup>129</sup>

### *3. Division by Competition: First Transcontinental Railroad*

CDS need not involve a predetermined division at all. Rather, the division can be determined directly by ongoing competition. Perhaps the best-known example of a division by competition is the First Transcontinental Railroad. It is part of the elementary-school canon that the railroad was built by two companies, with the division located at Promontory Point, Utah, the location of the “golden spike.” But Promontory Point was not a predetermined meeting point. Rather, the contractual arrangement established by Congress incentivized both companies to build as fast and as far as possible, with the final meeting point to be determined only upon completion of the railroad.

Through the Pacific Railroad Acts of 1862 and 1864, Congress authorized two companies, the Central Pacific in the west and the Union Pacific in the east, to build a railroad connecting the East and West Coasts.<sup>130</sup> The two railroads built towards each other from their respective starting points, with the ultimate meeting point to be determined by which railroad could build faster. The payoff for each railroad was tied directly to the amount of rail constructed: The government provided generous land grants and subsidized loans for each mile of track laid and, furthermore, each railroad would ultimately control the portion it constructed.<sup>131</sup> And because the entire distance was fixed, each railroad’s gains came at the expense of the other. The result was that both companies were spurred by competition to build at a breakneck speed, with the Central Pacific ultimately outpacing its rival, pushing the anticipated meeting point from the California-Nevada border all the way to central Utah.<sup>132</sup>

---

<sup>129</sup> Unfortunately, the private operation of the Subway was cut short primarily due to a combination of World War I inflation, the City’s refusal to permit either company to raise fares, and the resulting financial failure of both companies. Derrick, *supra* note 120, at 235–36.

<sup>130</sup> See Pacific Railroad Act of 1862, 12 Stat. 489, 490, 494; Pacific Railroad Act of 1864, 13 Stat. 356, 361.

<sup>131</sup> See David Haward Bain, *Empire Express: Building the First Transcontinental Railroad* 179–80 (1999).

<sup>132</sup> See *id.* at 271, 564, 569.

This dual-sourced structure provided significant benefits to the U.S. government. First was the speed of construction. Whereas a single contractor would have little incentive to beat the contractual deadline (and every incentive to lobby to push the deadline back, etc.), the competitive division of the Transcontinental Railroad, whereby profits were directly linked to the speed of construction, ensured that the railroad was built as quickly as each company could muster.<sup>133</sup> As a result, the railroad was completed in 1869—more than seven years prior to the contractual deadline of July 1, 1876.<sup>134</sup>

Although single-sourced contracts can also incentivize speedy delivery by including provisions such as bonus payments for beating a target date, such a structure is susceptible to manipulation. If, for example, the agreed-upon target date is too lenient, then the performance bonus is no more than a rent.<sup>135</sup> Setting the right baseline unfortunately depends on adequate government expertise and incentives in the negotiation process, both of which are often lacking, as explained in Part II above. The seven-year difference between the opening of the Transcontinental Railroad and the congressional deadline, for example, says as much about the leniency of the deadline as it does the efficiency of the contractors. Indeed, a favorable bonus structure is a means for an acquiescing government to award rents while flying under the radar.<sup>136</sup> A properly designed

---

<sup>133</sup> There may in some cases be a tradeoff between speed of delivery and quality, and incentivizing rushed performance may also incentivize substandard performance. In the case of the Transcontinental Railroad, quality was probably of little concern because each firm was to operate the track that it laid and therefore internalized the costs of shoddy work.

<sup>134</sup> See Pacific Railroad Act of 1864, 13 Stat. 356, 363–64; Bain, *supra* note 131, at 271, 297–98, 661. Unfortunately, breakneck speed came at a substantial human cost, and severe labor abuses are associated with the Transcontinental Railroad. See *id.* at 206, 239, 361–62, 428–29. One would hope that a government would strike a different balance today and ensure that the relevant contracts also provided for adequate labor protections. Compliance with these measures, too, could be used to shift work from one firm to the other.

<sup>135</sup> See Stefan Reichelstein, *Constructing Incentive Schemes for Government Contracts: An Application of Agency Theory*, 67 *Acct. Rev.* 712, 713 (1992) (identifying “informational rents” earned by contractors due to the government’s inability to dispute the contractor’s *ex ante* cost calculations).

<sup>136</sup> The Central Pacific, for example, profited greatly after successfully lobbying Congress to triple the payout for building through mountainous terrain, almost assuredly in excess of the bonus that was required. See Bain, *supra* note 131, at 84, 116. A more recent example is the 1994 Santa Monica Freeway reconstruction contract, which stipulated a \$200,000 bonus for each day ahead of schedule the work was completed. The contractor estimated a completion time of 140 days in its bid—later admitting that it knew all along that the work would be completed in fewer than 100 days—only to finish the job in 66 days, collecting a \$14.5 mil-

competitive dual-sourcing structure can avoid these problems, as both the completion date and the payout for speedy delivery are established through competition, not negotiation or legislation.

The dual-sourcing structure utilized for the Transcontinental Railroad also substantially reduced the risk to the government of poor contractor performance. The Pacific Railroad Act provided for redundancy by permitting each railroad to complete the entire railroad, building all the way back to the starting point of the other, in the event that its competitor failed to make progress.<sup>137</sup> Each source therefore served as a readily available backup for the other.

Significantly, there was no competitive-bidding process to select the railroad companies charged with building the Transcontinental Railroad. They were selected via ordinary politics: Interested companies lobbied Congress, and those with the most support were awarded a larger piece of the pie.<sup>138</sup> However, through dual sourcing, the risks ordinarily associated with noncompetitive awards (e.g., unqualified firms) were effectively mitigated. Even if, for example, the Union Pacific had been a complete failure, the railroad would still have been completed at nearly the same time and at nearly the same location by the Central Pacific and the Union Pacific Eastern Division. Indeed, one of CDS's most important benefits is that it can reduce the cost to the government of selecting the wrong contractor, which inevitably occurs by innocent mistake alone.

#### *4. Temporal Division*

Yet another dimension by which a contract can be divided is time. A temporal division involves the purchase of an entire good or service from a single vendor for a period of time, followed by the purchase of

---

lion bonus, nearly equal to the \$14.9 million contract amount. Zamichow & Ellis, *supra* note 62.

<sup>137</sup> See Pacific Railroad Act of 1862, 12 Stat. 489, 494–95. In fact, the Act even provided for double redundancy. The Union Pacific, which built westward from Omaha, was paralleled by the Union Pacific Eastern Division, which built westward from Kansas City. Bain, *supra* note 131, at 270–71. In the event that the Union Pacific failed or made insufficient progress, the railroad would continue to progress westward towards the Central Pacific route, through the redundant Kansas City line.

<sup>138</sup> Bain, *supra* note 131, at 115, 179, 271 (explaining the lobbying expenditures of the competing railroads and that the Union Pacific initially lobbied for a segment of the railroad up to the Nevada border, and then in the 1864 amendment, for as much as it could possibly build).

the entire good or service from a second vendor for a future period of time. A backup contractor is the most intuitive form of temporal CDS. Where a good or service is indivisible in the present, such as where the government requires only a single, discrete good during any given period, a temporal division is the only means of implementing CDS. However, in the ordinary case, other means of division will ordinarily be preferable. Two mobilized, engaged contractors in ongoing competition with each other will provide the government with greater information and remedial options than only one with the prospect of a future replacement, as in a temporal, backup contractor scenario.

In a sense, virtually all government contracts are temporally divided. Government contracts have terms, and for services that will be needed beyond the stated term, another contract will be procured for the following term. The selection of a single contractor for a defined term is single sourcing, with none of the benefits provided by ongoing competition: No second vendor is incentivized to monitor the first, and the costs to the government of terminating and replacing the contractor remain great.

CDS, rather, would require the selection of two vendors, not one, for the contract term, and the ability for the government to reallocate the division based on performance. A simple example would be the selection of a back-up contractor. For example, Vendor *A* is awarded the contract for the entire five-year term, but the government has the right to terminate Vendor *A* and transfer the contract to Vendor *B*, the backup awardee, without the need to initiate a new procurement process. Under this framework, Vendor *B* has the incentive to monitor Vendor *A*'s performance, and the cost to the government of terminating Vendor *A* is reduced, as no reprocurement and negotiation is necessary.

The backup contract would, of course, need to account for various business and operational realities. The backup contract is fundamentally a call-option contract and may, for example, involve an up-front payment to the vendor to cover its opportunity cost,<sup>139</sup> as would be expected for an option-supply contract. The backup contract may also include a mobilization period to account for the reasonable time required for the backup vendor to commence operations. However, provisions of this nature can be determined through the ordinary procurement process, in-

---

<sup>139</sup> The second source might, for example, need to bid on one fewer project in order to reserve sufficient capacity in the event the government exercises its call option. Government contractors routinely deal with probabilities of being awarded an additional contract, as is the case whenever the contractor bids on a public project.

cluding market research on mobilization times, which would be incorporated into the specifications of the solicitation, and a requirement that bidders provide bids for both the primary contract and the backup option contract.

One unique application of temporal CDS is to help create a competitive market where none currently exists, such as where the service is specialized and only the entrenched incumbent has experience. In the context of a five-year service contract, if the incumbent is awarded the first three years and the newcomer the last two years, then the newcomer has a three-year mobilization period, which may help it overcome its lack of experience. And, if the newcomer fails, then the government has the right to re-engage the incumbent on predetermined terms, softening the risk to the government of hiring the newcomer.

Recently, the U.S. Treasury Department conceptualized a scheme of temporal dual sourcing to foster competition in the face of a very long-tenured incumbent. Crane & Company (“Crane”) has provided the Department with virtually all of its currency paper since the nineteenth century and, accordingly, no experienced competitors exist.<sup>140</sup> The Department attempted to gain the benefit of competition by issuing a solicitation that contemplated a two-year mobilization period for an alternative supplier, with the following four years of the contract to be split between Crane and the alternate.<sup>141</sup> This effort was stymied by a statute that limited currency-paper contracts to four-year terms, thereby precluding any effort to provide effective mobilization periods.<sup>142</sup> However, the statute was subsequently amended to remove the four-year cap and to expressly permit the division of the work between two firms, in order “[t]o promote competition among manufacturers of the distinctive paper . . . .” — despite the efforts of the senator whose district contained the Crane headquarters to insulate the company from competition.<sup>143</sup> The Crane experience indicates that temporal CDS is not a certain panacea to government-granted monopolies, but in the absence of legislative barri-

---

<sup>140</sup> Crane & Co., Inc., B-297398, at 4 (Comp. Gen. Jan. 18, 2006).

<sup>141</sup> *Id.* at 3–4.

<sup>142</sup> *Id.* at 8; 31 U.S.C. § 5114(c) (2000); Ylan Q. Mui, Crane Has Provided the Paper for U.S. Money for Centuries; Now it’s Going Global, Wash. Post (Dec. 13, 2013), [https://www.washingtonpost.com/business/economy/crane-has-provided-the-paper-for-us-money-for-centuries-now-its-going-global/2013/12/13/9aa4190a-5c39-11e3-be07-006c776266ed\\_story.html](https://www.washingtonpost.com/business/economy/crane-has-provided-the-paper-for-us-money-for-centuries-now-its-going-global/2013/12/13/9aa4190a-5c39-11e3-be07-006c776266ed_story.html) [<https://perma.cc/6Z4R-W2KD>].

<sup>143</sup> 31 U.S.C. § 5114(c) (2012); Mui, *supra* note 142.

ers, or in situations where those barriers can be overcome, it is a viable solution to increase competition.

### 5. *Substitution*

Substitutive dual sourcing involves two contractors selected through two different procurements and awarded contracts for two different scopes of services—much like any two, unrelated government contracts. But, where the product of one firm can substitute for the product of another, the contracts can permit the government to order that result.<sup>144</sup> With a substitutive arrangement, the government gains a credible threat to terminate a poorly performing contractor, and the two contractors have an incentive to monitor each other, just as would be the case where the contract for a single good is divided between two firms. Substitutive CDS therefore preserves the benefits of CDS in certain situations where actual or temporal contract division is neither possible nor advisable.

Substitutive dual sourcing can be most effectively used in situations where the government is procuring two different types of physical goods that require low fixed costs and that serve the same core function. To illustrate, in recent years, police departments have been purchasing two types of police cruisers: (1) sedans in the classic police-car style, which are gussied-up versions of large family sedans such as the Ford Taurus and Dodge Charger and (2) SUV-based police cruisers based on vehicles such as the Chevrolet Tahoe and Ford Explorer.<sup>145</sup> Both the SUV and the sedan-based cruisers serve the same essential function, and the fixed costs associated with any particular vehicle (vehicle-specific training programs, supplies of spare parts, etc.) are low enough to permit a department to switch from one vehicle to another (as departments are currently doing following the 2011 discontinuation by Ford of the ubiquitous Ford Police Interceptor based on the Crown Victoria sedan).<sup>146</sup> Accordingly, if a department procures cruisers of both types, the de-

---

<sup>144</sup> See Burnett & Kovacic, *supra* note 20, at 297–98, for a discussion of the use of substitution in military procurement.

<sup>145</sup> See Eric Robinette, *More Police Departments Choosing SUVs over Sedans*, *Journal-News* (Dec. 19, 2013), <http://www.journal-news.com/news/news/more-police-departments-choosing-suvs-over-sedans/ncPKS/> [<https://perma.cc/7KGC-LRVH>].

<sup>146</sup> See *id.*; Kelly Gardner, *Raleigh PD Debuts New Patrol Vehicles*, *WRAL.com* (Apr. 2, 2014), <http://www.wral.com/raleigh-police-debuts-new-patrol-vehicles/13534065/> [<https://perma.cc/5LJB-DNVJ>] (replacing the Crown Victoria sedan-based cruiser with both Ford and Chevrolet models).

partment is easily able to switch from one type to the other (in whole or in part) in the event of any performance issues so long as the contracts contain provisions permitting the department to increase or diminish its orders at its discretion. This is substitutive CDS.

However, substitutive CDS likely is not a viable alternative where fixed costs are high. Light rail and buses, for example, serve the same essential function of moving people throughout a city. Although there are certainly relative advantages of one mode over the other in a given situation, bus and rail both move people from Point A to Point B and can substitute for each other; indeed, modern mass-transportation planning involves a consideration of the costs and benefits of both bus and rail before deciding on one mode or the other for a particular line.<sup>147</sup> But the fixed costs of rail (right-of-way acquisition, tunnels or raised guideways, etc.) are so high that a government cannot feasibly substitute one mode for the other after performance has commenced. If buses are not delivered to specification, the government cannot readily add a light rail line to cover the intended route, and if the trains are not delivered on time, the government cannot make the constructed tracks disappear and buy a few more buses. Fixed costs must therefore be considered prior to relying upon substitutive CDS as a remedy.<sup>148</sup>

#### *6. Variations in Shifting Mechanisms*

A key trait of any CDS arrangement is that the government can shift work from one contractor to the other in response to contractor performance. That shift can be accomplished any number of ways.

---

<sup>147</sup> See, e.g., Nashville Metro. Transit. Auth., *The Future Is Coming: Broadway | West End Corridor Study, The East-West Connector Final Report, ES-2 to ES-3* (2012), <http://www.nashvillemta.org/PDF/BWE-LPA-Report-FINAL3.pdf> [<https://perma.cc/B7ZL-MNDW>] (considering both light rail and bus solutions for mass-transit solution).

<sup>148</sup> In some situations, fixed costs or other substitutive problems only run one way, and substitutive dual sourcing could be a viable approach for one contract but not the other. The Navy's F/A-18 fighter and the Air Force's F-16 fighter illustrate one such situation. The F/A-18 could have served as the Air Force's fighter in the event of a problem with the F-16 program (in fact, the F/A-18 was seriously considered by the Air Force over the F-16 and continues to serve as the backbone of the Canadian Air Force). Michael M. Atkinson & Kim Richard Nossal, *Bureaucratic Politics and the New Fighter Aircraft Decisions*, 24 *Can. Pub. Admin.* 531, 537 n. 15 (1981). But the inverse is not true: The Navy has maintained that the F-16 cannot operate from an aircraft carrier. Pyatt, *supra* note 26, at 330 ("An F-16 cannot land on a carrier and still be an F-16."). As a result, the Air Force could have protected itself against vendor default with the Navy's program, but the Navy would have needed to select a true second source.

A shift is related conceptually to a termination for convenience, a discretionary right reserved to the government in virtually every government contract, in that it involves taking all or a portion of the work away from a vendor.<sup>149</sup> The other component of a shift, the assignment of work to another vendor, is analogous to a call option, which is also a discretionary right reserved by the government in certain contracts.<sup>150</sup> The baseline for a shifting mechanism is therefore a discretionary decision by the government to take work away from one vendor and assign it to the other.<sup>151</sup>

That discretionary decision, however, can be made by any number of possible actors. The decision could, for example, be left to the sole discretion of the contract manager or to the government's chief administrator (e.g., a city manager). Alternatively, a shift could require a formal resolution of the relevant legislative body (e.g., the city council), or even require a supermajority or unanimous vote of that body. Generally, requiring higher levels of involvement and agreement makes the initial division "stickier," and vice versa.

There are good reasons to be concerned about the appropriate level of stickiness in CDS.<sup>152</sup> As the portion of work allocated to a single vendor approaches 100%, the ongoing benefits of having a second source disappear. Once Vendor *A* has been terminated completely and the work is assigned to Vendor *B* alone, the threat of a future shift (to a now demobilized Vendor *A* or following a brand-new, lengthy procurement) is unlikely to keep Vendor *B* honest, and Vendor *A*, having suffered a total

---

<sup>149</sup> See FAR 49.501–502 (2014) (prescribing termination-for-convenience clauses in federal contracts).

<sup>150</sup> The Washington Metropolitan Area Transit Authority, for example, awarded a subway-car contract in 2010 that included a base buy of sixty-four cars with five call options, any of which can be exercised at the authority's sole discretion, for a total of up to 684 additional cars. See Wash. Metro. Transit Auth., Board Action/Information Summary: 7000 Series Railcar Procurement Program (May 27, 2010), [https://www.wmata.com/about\\_metro/board\\_of\\_directors/board\\_docs/052710\\_FINALAdmin127000SeriesRailcars.pdf](https://www.wmata.com/about_metro/board_of_directors/board_docs/052710_FINALAdmin127000SeriesRailcars.pdf) [<https://perma.cc/A286-QE8M>].

<sup>151</sup> Another possible mechanism for effectuating shifts is to *require* a shift if certain conditions are met, thereby automating the shift. An automated shift requires that the conditions triggering a switch be anticipated in advance and accurately specified, and this will not always be possible. Worse, an automatic termination-for-convenience provision effectively grants the vendor the option to terminate the contract at its discretion simply by withholding performance. As a general rule, therefore, contract termination is therefore very reasonably left to the discretion of the government.

<sup>152</sup> See Lee Anne Fennell, Willpower Taxes, 99 *Geo. L.J.* 1371, 1414–15 (2011), for a discussion of the appropriate level of "stickiness" in the tax context.

defeat, is unlikely to continue to monitor Vendor *B* with the same diligence as before. Effectively, Vendor *B* has become a single source. In addition, a dual-source structure may be based on long-term policy considerations. A temporal division designed to create a competitor to an entrenched incumbent requires a long-term view, and terminating the newcomer at the first signs of growing pains would undermine the goal of the structure.

Accordingly, the legislative body is perhaps best suited to consider large-scale shifts, such as the complete termination of one firm, while smaller shifts can be delegated down the chain of command. For example, if contracts are split evenly between two vendors, the day-to-day contract administrator could have the authority to shift up to ten units from one vendor to the other, whether all at once or cumulative of several smaller shifts, resulting in a sixty/fifty split. The relative ease of the shift ensures that it is not an idle threat, but the cumulative cap of ten percent prevents a lower-level civil servant from disrupting the entire dual-sourcing scheme. Meanwhile, the City Manager could be empowered to shift up to an additional fifteen units, yielding up to a seventy-five/twenty-five split. The Manager's decision will involve the review of multiple administrators, making the shift less likely and, if it does occur, more likely to be justified and to serve the long-term needs of the city. Any greater shift, including a shift of all of the work to a single vendor, would require a majority vote of the city council, along with all of the process that such an action entails, such as a public forum where the aggrieved vendor can make its case.

### *C. Competitive Dual Sourcing versus Performance Bonds*

In a sense, dual sourcing is widespread—at least for public construction projects governed by the federal Miller Act<sup>153</sup> and its many state analogues, the “Little Miller Acts.”<sup>154</sup> The Miller Act mandates that government contractors provide performance bonds, and should the government terminate its contractor, the performance bond requires that the surety complete the project at its own cost or, at the agency's option,

---

<sup>153</sup> See 40 U.S.C. § 3131 (2015) (setting out the statutory framework requiring performance bonds for federal construction contracts).

<sup>154</sup> See, e.g., Cal. Pub. Cont. Code §§ 10220–32 (Deering 2009); Fla. Stat. § 255.05 (2015); N.Y. State Fin. § 137 (Consol. 2011).

reimburse the agency to complete the project using other means.<sup>155</sup> The surety can therefore be thought of as a type of back-up contractor. However, there are critical distinctions between a surety and a second source selected by the government that compromises the effectiveness of a Miller Act performance bond.

A critical distinction between a procured backup contractor and a surety is that, in short, the dual-sourced contractor wants the work and the surety does not. The obligation of a surety to commence the work is triggered by a for-cause termination of the primary contractor and is accompanied by the obligation of the surety to pay for the cost of completion and other damages suffered by the government up to the bond amount. Unlike a second source, which is paid for and profits from work assigned to it, the surety loses money. Accordingly, any switch from the contractor to the surety can be expected to engender litigation, with both the surety and the terminated contractor challenging the government's determination that the primary contractor committed a material breach.<sup>156</sup> The switch from a primary contractor to a surety, therefore, is costly as compared to CDS, and the need to prove cause diminishes the credibility of the government's threat to terminate the contract and the ability of this threat to incentivize honest performance.<sup>157</sup>

In addition to the increased cost, a surety is far less certain a stand-in than a procured backup contractor. Once a default has been declared, the surety might decide to commence the work and litigate who pays for it down the road, but the surety might also refuse to commence the work and instead challenge the for-cause termination up front. The contractor typically urges the surety to take the latter course of action, which of course stands in the way of the timely completion of the work, as no work may be completed during the pendency of the litigation.<sup>158</sup>

The surety's aversion to completing the work stands in the way of many other benefits of CDS. The surety will not lobby in opposition to

---

<sup>155</sup> See Stanley A. Martin & James J. Myers, *Construction Contract Remedies and Damages*, 76 *Mass. L. Rev.* 170, 181 (1991).

<sup>156</sup> See *id.* at 180–81 (outlining defenses available to surety and contractor).

<sup>157</sup> The Los Angeles subway litigation, for example, lasted for several years and cost the city several million dollars in attorney's fees before the city agreed to convert the termination for cause into a termination for convenience, thereby letting the surety off the hook entirely. See *supra* note 61.

<sup>158</sup> Worley, *supra* note 61, at 40, 43 (explaining that, after the owner claims a default has occurred and calls upon the surety to complete the work, the contractor generally disputes the default and urges the surety to refuse to complete).

the primary contractor and therefore does not help to mitigate the problems of regulatory capture and rent seeking. In fact, the surety often benefits from the same change orders and lax oversight that benefits the primary contractor. A change order granting a time extension, for example, reduces the probability of a breach, thereby reducing the probability that the surety will be called in to pay for the completion of the work.<sup>159</sup> Similarly, a captured agent's decision to overlook quality problems (and therefore not declare a breach) also benefits the surety. And because, unlike a second source, the surety does *not* want the primary contractor to fail, the surety has no incentive to monitor the contractor's performance and report its findings to the government, thereby eliminating yet another benefit of CDS.

Furthermore, a Miller Act performance bond results in an all-or-nothing shift: Either the primary contractor performs all the work under the contract, or the primary contractor is terminated for cause and the surety performs all the remaining work. CDS, on the other hand, splits the work between two contractors, thereby providing benefits such as redundancy and increased competition. In addition, CDS permits incremental shifts from one contractor to another, which are therefore more likely to be utilized than the full termination required for a performance bond, thus creating a more credible remedial threat. Altogether, a Miller Act performance bond is not as powerful a remedial tool as CDS, providing only a subset of the benefits and at a greater cost—both financially and politically.

However, notwithstanding those shortcomings, a Miller Act performance bond does provide the government with some real benefits. Much like a dual-sourced backup contractor, the surety is obligated to stand in the shoes of a terminated contractor and perform the work pursuant to the terms of the underlying contract. The presence of the surety therefore allows the government to terminate its primary contractor without the need to procure a replacement contractor, saving substantial time and

---

<sup>159</sup> In some cases, contract amendments not agreed to by the surety will also discharge the surety of its obligation entirely. See, e.g., *Zastrow v. Knight*, 229 N.W. 925, 929–30 (S.D. 1930). However, the performance bonds used in modern government contracts typically require that the surety consent in advance to any amendments. See, e.g., L.A. Cty. Transp. Comm'n, Performance Bond, Contract No. B251 (June 24, 1992) (on file with author) (“Surety, for the value received, hereby stipulates and agrees that no change, extension of time, alteration or modification of the Contract, or of the work to be performed thereunder, shall in any way affect its obligations under this bond, and it does hereby waive notice of any such change . . .”).

money—just as is the case with a dual-sourced back-up contractor. A key distinction between a Miller Act performance bond and a dual-sourced backup contractor is that a backup contractor is vetted and selected by the government through the same procurement process that produces the primary contractor, whereas the government does not select the surety.<sup>160</sup> However, for routine construction projects, the surety should be expected to perform capably as a stand-in to the primary contractor. Indeed, completing partially finished construction projects is the surety's business.<sup>161</sup> For many construction projects, therefore, a Miller Act performance bond provides at least one key advantage of dual sourcing: obligating a capable firm to complete the project if needed.

For more specialized projects, however, that conclusion crumbles. Consider the problems with the Los Angeles subway—subway tunneling is specialized work, and no more than a few firms have the experience to do the job.<sup>162</sup> A typical surety surely will have substantial experience completing public buildings, roadways, and other common public construction projects, but just as surely will lack the experience required to assess, repair, and complete a half-finished, collapsed subway tunnel. The surety could procure a specialized contractor to do the work on its behalf, but the surety's lack of experience managing such a contractor may be a cause for concern.<sup>163</sup> For highly specialized construction pro-

---

<sup>160</sup> The government may impose, through the solicitation, rating requirements that the surety must meet. See, e.g., Lake County, Fla., Construction Invitation to Bid, ITB No. 15-0037, at § 1.9.2, [https://www.lakecountyfl.gov/ProcurementDocuments/15-0037\\_InvitationtoBid.pdf](https://www.lakecountyfl.gov/ProcurementDocuments/15-0037_InvitationtoBid.pdf) [<https://perma.cc/GF6P-LQ8L>].

<sup>161</sup> See Worley, *supra* note 61, at 43 (“[C]ompleting busted projects is a significant part of the surety business. Sureties have developed considerable expertise in completing projects without wasting money.”).

<sup>162</sup> For example, New York City hired essentially the same contractor to construct the Second Avenue subway that Los Angeles fired during the construction of the Los Angeles subway—both were joint ventures controlled by the same firms. See Press Release, Metro. Transit Auth., Blasting for Second Avenue Subway 72nd Street Station Completed (Mar. 4, 2013), <http://www.mta.info/press-release/mta-headquarters/blasting-second-avenue-subway-72nd-street-station-completed-0> [<https://perma.cc/B86B-AEAF>] (identifying the Second Avenue Subway contractor as “SSK Constructors (a joint venture of Schiavone, Shea and Kiewit)”); Rabin, *supra* note 2 (identifying the L.A. subway contractor as Shea-Kiewit-Kenny).

<sup>163</sup> Indeed, after Los Angeles terminated its subway contractor, the surety for the contract offered to perform the repair and completion work, presumably believing that it could better control the costs for which it might ultimately be liable. See Letter from Gerard M. Kenny, President, Kenny Constr. Co., to Joseph Drew, C.E.O., Metro. Transp. Auth. (Jan. 24, 1996), [http://boardarchives.metro.net/Items/1996/01\\_January/items\\_g\\_0191.pdf](http://boardarchives.metro.net/Items/1996/01_January/items_g_0191.pdf) [<https://perma.cc/XGY7-HNTH>]. The city, however, reasonably concluded that it could achieve better

jects, therefore, a surety is less likely to be able to perform than a procured second source and may not be a suitable stand-in for dual sourcing.

### III. IMPLEMENTING COMPETITIVE DUAL SOURCING

Dual sourcing, to be sure, has been utilized successfully by governments in the past, and a few of these instances have been described above. However, with very few exceptions, single sourcing remains the default and dominant contracting regime, particularly for subnational governments. Due to significant institutional and political barriers, the government is systematically unable to accurately assess or act upon the comparative benefits of dual sourcing. CDS must therefore be made mandatory, with only limited provisions for waiver, if it is to become widespread.

#### A. Agent Incentives

In the absence of regulations *requiring* the use of multiple sources,<sup>164</sup> the decision to dual- or single-source is a matter left to the government's discretion, and CDS therefore requires the support of the government's agent, the procurement officer.<sup>165</sup> In order to dual source, the procurement officer must at the outset decide to draft a solicitation that provides

---

results by turning to its stable of existing, vetted subway contractors performing other portions of the work. See *supra* note 10.

<sup>164</sup> Currently, state and local procurement regulations generally permit, not require, multiple awards, and even where a solicitation expresses an intent to award two contracts, the government may still elect to award only one without any special justification. See, e.g., Augusta, Ga. Procurement Reg. § 1-10-65, <http://www.augustaga.gov/DocumentCenter/Home/View/4256> [<https://perma.cc/8JHA-QEKB>] (allowing multiple contracts to be awarded at agency's discretion unless solicitation does not anticipate multiple awards); N.Y. State Procurement Guidelines § V.B.11 (May 2014), <http://www.ogs.ny.gov/bu/pc/Docs/Guidelines.pdf> [<https://perma.cc/59FN-JTRJ>] (requiring that solicitation state whether single or multiple contracts will be awarded); Va. Pub. Procurement Act § 2.2-4302.2 (describing that if solicitation permits and provides conditions for multiple awards, either a single contract or multiple contracts may be awarded, at the sole discretion of the agency).

<sup>165</sup> Lyon, *supra* note 19, at 241 (“[T]he use of dual sourcing for a particular missile is not exogenously imposed. Instead, procurement officers decide whether to use dual sourcing . . .”). The government-contracting process usually involves the designation of a bureaucrat, deemed the “procurement official,” to serve as the government's agent. Yukins, *supra* note 71, at 67, 71; Hansen, *supra* note 70, at 141. The procurement official is charged with drafting the solicitation, which details what the government desires to purchase and requests bids from prospective vendors, and managing the evaluation and contract-negotiation processes. See, e.g., Marshall, et al., *supra* note 39, at 11-12.

for the selection of two vendors.<sup>166</sup> That initial step is a prerequisite to dual sourcing: If the solicitation provides for a single contract award, the government cannot later decide to award two.<sup>167</sup> Second, even if the procurement officer drafts the solicitation to permit awards to two vendors, she still has an opportunity further along in the procurement process to single-source by deciding to negotiate and recommend an award of a contract to only the highest-ranked vendor instead of the top two. Accordingly, where dual sourcing is merely permitted, and not mandated, the procurement officer must be on board with dual sourcing from the beginning of the procurement process until the end, when the vendors have been formally recommended for contract awards.

The procurement officer is not the end-user of the procured goods and services, does not manage the resulting contract, and of course does not pay for the contract deliverables. Nor does the procurement officer pay for any problems that might arise during performance, such as change orders, litigation, or procuring a brand-new contractor to replace a failed one. The principal-agent problem is therefore clear: The procurement officer internalizes the costs of the instant procurement and negotiation process, but does not internalize the costs related to contractor performance. CDS, however, requires that the procurement officer internalize substantial procurement and negotiation costs—negotiating twice the contracts, conducting twice the background checks, etc., yet the procurement officer internalizes none of the benefits of dual sourcing, such as improved contractor performance and reduced switching costs in the event of poor performance by one of the two contractors. The procurement officer should therefore be expected to promote single sourcing, even where CDS would be preferable from the standpoint of the public.<sup>168</sup>

---

<sup>166</sup> There are circumstances in which third parties are hired to draft the solicitation (which creates a different principal-agent problem), or where the solicitation is subject to review and approval by the governing body (which might mitigate the principal-agent problem but introduce additional political factors). However, in the ordinary case, the procurement officer drafts the solicitation.

<sup>167</sup> See, e.g., *In re N.F.E., Inc.*, B-241460 (Comp. Gen. Dec. 21, 1990), <http://www.gao.gov/assets/510/500342.pdf> [<https://perma.cc/HKP8-CXHS>] (holding that multiple awards could not be considered where solicitation did not contain any provision permitting multiple awards).

<sup>168</sup> See Burnett & Kovacic, *supra* note 20, at 287 (explaining that dual sourcing may require government officials to exercise more responsibility than they would prefer); Yukins, *supra* note 71, at 73 (explaining that procurement officers will tend to underinvest in transaction costs due to their failure to internalize the concerns of the principal); Hansen, *supra* note

Furthermore, in circumstances more complex than dividing an order of 100 widgets, CDS will require a creative division of the scope of work between the two firms. Unfortunately, when structuring procurements, creativity is not encouraged: Procurement officers have strong incentives to use tried-and-true methods at the expense of innovation.<sup>169</sup> As is often the case with public servants, procurement officers do not receive bonuses for taking risks that pay off, or for ingenuity in general.<sup>170</sup> Incentives rather push towards providing exactly what is expected. In the government-procurement world, that means providing a familiar-looking contract with the single highest-ranked bidder, not designing novel ways to split the work between two bidders. Accordingly, in order to become implemented more widely, CDS cannot be left to the discretion of the procurement officer: It must be mandated.<sup>171</sup>

### *B. Industry Preferences*

These institutional barriers to CDS are compounded by the ex ante preferences of the industry, which point in the same direction—single sourcing. Vendors play a significant role in the shaping of the solicitation. Prior to issuing a solicitation, the procurement officer ordinarily schedules discussions with potential vendors and requests their comments on draft solicitations.<sup>172</sup> More directly, procurement officers often rely on potential vendors to assist with the drafting of the solicitation itself.<sup>173</sup> The industry, therefore, has multiple opportunities to shape the procurement process, and individual firms will endeavor to shape the process to their own advantage.<sup>174</sup>

---

70, at 141–42 (stating procurement officers have incentives to conduct procurements as quickly as possible and minimize process).

<sup>169</sup> Yukins, *supra* note 71, at 77 (noting that procurement officials have incentives to take less risk than permitted by law and will eschew novel procurement techniques).

<sup>170</sup> See Marshall, et al., *supra* note 39, at 14–15 (explaining how procurement officials are not compensated for additional effort).

<sup>171</sup> See the discussion on drawbacks of dual sourcing in Section IV.D., *infra*, for examples of where waiver of a dual-sourcing mandate would be appropriate.

<sup>172</sup> See FAR 10.003 (2015) (describing market-research requirements and procedures applicable to federal procurements); Miami-Dade County Procurement, Future Solicitations, <https://www.miamidade.gov/DPMww/FutureSolicitations.aspx> [<https://perma.cc/3PMX-7X3T>] (identifying reasons for posting drafts of future solicitations, including “enabl[ing] vendors to offer feedback on the specifications”).

<sup>173</sup> Marshall, et al., *supra* note 39, at 16–17.

<sup>174</sup> See *id.* at 22 (discussing how potential vendors constantly contact procurement officials to attempt to influence the bid specifications to their own advantage). However, lobbying in

Although industry lobbying can help achieve desirable results, such as when a firm fights its unjustified exclusion from competition, firms can be expected to lobby against socially undesirable actions only when doing so furthers their own interests.<sup>175</sup> Although an excluded firm will fight its exclusion, potentially to the benefit of the public,<sup>176</sup> a firm has no incentive to combat a specification that does it no harm, even if the specification harms the public. Unfortunately, single sourcing generally falls into the latter category of specifications. In many cases, firms that monitor the solicitation-drafting process and lobby for terms in their favor will prefer single sourcing, thereby not merely failing to mitigate, but reinforcing and compounding the procurement officer's incentives to single source.

Since bid specifications are drafted before bids are prepared, submitted, and evaluated, a firm must engage in a purely *ex ante* analysis of the expected impact of any particular solicitation term on its bottom line, that is, the expected value of the underlying government contract. At this point in time, the contract's expected value is the product of two primary factors: (1) the probability of award (i.e., winning the procurement)<sup>177</sup> and (2) the expected profitability of the contract. When lobbying the agency during the solicitation-drafting stage of the procurement, a firm desires to maximize its advantage with respect to both prongs.

---

some cases benefits the public by helping to ensure that procurements remain competitive. For the same reasons that a procurement officer might desire to cut corners by choosing to negotiate only one contract rather than two, the procurement officer might also desire to pursue a noncompetitive, sole-source process that eliminates the solicitation-drafting and evaluation processes entirely. But as long as there is more than one qualified firm seeking work in the jurisdiction, the excluded firms will have an incentive to lobby against the contemplated noncompetitive procurement. The public is generally understood to benefit from full and open competition between all qualified firms, as compared to the coronation of a single vendor in the absence of competitive bidding. Indeed, the preference for fair competition is the heart of public-procurement law. See, e.g., *Wester v. Belote*, 138 So. 721, 724 (Fla. 1931) (explaining that public-procurement regulations were adopted because of a "distrust of public officers whose duty it is to make public contracts," and they serve to "protect[] the public against collusive contracts" and "secure fair competition upon equal terms to all bidders").

<sup>175</sup> See Marshall, et al., *supra* note 39, at 27 (stating that firms will not protest decisions that are harmful to taxpayers if not also sufficiently harmful to the firm).

<sup>176</sup> A firm could be excluded from competition for legitimate reasons, such as failing to meet experience requirements. If the firm successfully lobbies to be included, then the government at best wastes resources reevaluating a bidder that will not be awarded the contract, and at worst contracts with a vendor that is going to fail.

<sup>177</sup> See Andrew Mayer, *Military Procurement: Basic Principles and Recent Developments*, 21 *Geo. Wash. J. Int'l L. & Econ.* 165, 175 (1987) (explaining that vendors may not bid on a contract if they perceive too small a probability of obtaining an award).

The probability of award can be maximized by the inclusion of requirements that exclude or disadvantage competitors or by evaluation criteria and preferences that are most favorable to the firm.<sup>178</sup> The profitability of the contract, on the other hand, can be maximized by provisions that reduce the cost of performance, such as lower bonding requirements or technical alternatives that the firm can produce at a lower cost than the government's initial selection, or provisions that increase the payout to the firm, such as cost-adjustment provisions and longer contract terms.

At first blush, dual sourcing cuts both ways. Dual sourcing increases the probability of award, at least in the aggregate. If two firms are selected instead of one, the probability of a generic competing firm being awarded a contract certainly increases. Necessarily, in a large field, that increase is not shared equally by all firms. In a two-firm showdown, if the lower-cost provider can lobby effectively for a price-centric evaluation, that firm will estimate its probability of being awarded a single contract at 100%. Dual sourcing, therefore, doubles the probability of a generic bidder being awarded a contract, but none of that benefit goes to the firm that is able to skew the outcome in its favor. Instead, it is the firm that was outmaneuvered politically that benefits from CDS, as its chance of being awarded a contract goes from zero to 100%.

Although the probabilities of success and failure are rarely so clear cut, in general, CDS will favor the firms that are *less* able to lobby effectively and harm the firms that are more able to lobby effectively by reducing the profitability of the contract.<sup>179</sup> These firms should therefore be expected to lobby procurement officers to single source each individual procurement. These industry preferences, like the procurement officer's incentives to single source, can however be overcome by mandating CDS in every case.

Significantly, the political barriers to implementing CDS on a case-by-case basis do not stand in the way of a legislative decision to mandate CDS prospectively. Although a firm will often be able to assess its

---

<sup>178</sup> A lower-cost, lower-quality provider, for example, could lobby for criteria that focus on the bottom-line price, whereas a higher-cost, higher-quality provider could lobby for criteria that emphasize quality.

<sup>179</sup> Being awarded a smaller contract can obviously be expected to reduce profits. But even if dual sourcing contemplates the award of only a back-up contract to the second-ranked firm, the top-ranked firm is still worse off as compared to single sourcing. The top firm, for example, is more likely to be terminated and less likely to be able to negotiate favorable change orders if a back-up supplier has already been selected.

probability of victory in the context of a specific procurement, a firm cannot similarly predict its probability of victory for undefined future procurements. In fact, few firms will be able to anticipate whether they will be competing for any future work in a particular jurisdiction considering a CDS mandate. An expenditure of lobbying resources to fight a prospective CDS mandate—where the firm is just as likely to be benefited as harmed by the mandate, if it is affected at all—would therefore not be justified.<sup>180</sup> Furthermore, a CDS mandate (again, outside of the context of a particular procurement where its impact on the competition can be ascertained) should be politically attractive to elected officials, as it permits them to award contracts to twice as many firms, with a corresponding increase in political benefits.<sup>181</sup>

#### IV. MINIMIZING THE COSTS OF COMPETITIVE DUAL SOURCING

This Article has explored many possible iterations and benefits of CDS. But CDS is not free and should be expected to impose a variety of costs. However, these costs can in many cases be minimized through thoughtful procurement design, and in the majority of cases the benefits of CDS should be expected to outweigh the additional costs.

##### *A. Administrative Costs*

Theoretically, certain administrative costs could double under CDS, as the government must negotiate and administer twice the number of contracts, perform the required pre-award due diligence on twice the number of firms, and so on. However, some of these tasks will not in

---

<sup>180</sup> To ensure that firms are not motivated by specific procurements to lobby against a CDS mandate, the mandate may need to carve out all currently planned procurements.

<sup>181</sup> The political benefits of “spreading the work around” to as many firms as possible are well recognized. See, e.g., John E. Ullmann, *Defense Cuts, Base Closings, and Conversion: Slow Reaction and Missed Opportunities*, in *From Cold War to New World Order: The Foreign Policy of George H.W. Bush* 407, 409 (Meena Bose & Rosanna Perotti eds., 2002) (“The Department of Defense . . . keeps careful statistics on spending by congressional district, and its officials readily admit that they spread the work around so as to maximize the political impact of their procurement decisions.”). Some procurement regulations even formally endeavor to do so by allocating additional points to firms that have not recently been awarded contracts by the jurisdiction. See, e.g., Hillsborough Cty., Fla. Procurement Servs., *Procurement Policies & Procedures*, Appendix I: CCNA Volume of Work Points (Sept. 16, 2015), <http://www.hillsboroughcounty.org/documentcenter/home/view/3952> [https://perma.cc/G53B-54GY] (illustrating that the point scale is inversely proportionate to the volume of work performed for Hillsborough County in the past two years).

practice require double the effort when performed twice. Drafting the second recommendation memorandum for the legislative body, or even drafting the second contract, should involve little more than cutting and pasting from one document to the other. Other tasks, such as administrative oversight, may actually be less costly under CDS due to competitive private oversight, as explained above in Part III.

Further, CDS does not necessarily require double the number of contracts. Although CDS requires the horizontal division of work between two firms, work that would otherwise be divided vertically between multiple firms can be combined, resulting in the same number of contracts. For example, a subway procurement might be divided vertically into six different contracts: (1) tunnel design, (2) tunnel construction, (3) station design, (4) station construction, (5) subway cars, and (6) signaling equipment. This vertically-divided structure requires six separate solicitations and six separate contracts. Those six contracts need not be divided into twelve (two for each of the six components) in order to implement CDS. Rather, the entire project could be bundled and divided horizontally between two firms or between teams of firms assigned portions of all six components, such as one contract for the northern corridor of the subway system and a second for the southern corridor. By combining the different components that would otherwise be procured separately, the bundled dual-sourced alternative should in certain cases require *fewer* administrative costs. This subway example would require only one procurement process (with two awardees) and one basic contract form, as compared to six procurements and six contract forms.

Of course, the government could also award the entire vertically-integrated project to a single contractor, which would reduce transaction costs even further. However, hiring a single contractor to perform an entire project, that is, a “single prime contractor,” increases the government’s susceptibility to shirking, hold-ups, and the other problems addressed in this Article. Because CDS can be utilized to address these very problems, a vertically integrated project split horizontally between two competing firms can be utilized where a single prime contractor would be inadvisable.<sup>182</sup>

---

<sup>182</sup> Cf. Eddy M. Rojas, *Single Versus Multiple Prime Contracting*, 134 *J. Construction Engineering & Mgmt.* 758, 758 (2008) (comparing single prime contracting to “multiple prime contracting,” defined as procuring both the general contractor and subcontractors, as opposed to splitting the contract between two prime general contractors).

Finally, even to the extent that CDS imposes additional administrative costs, those costs must be balanced against the benefits of dual sourcing, which can be significant, as discussed above. There is empirical support for this conclusion: Thomas Lyon's analysis of several Air Force missile procurements reflects an average reduction in costs of 20.4% when dual sourcing is used, as compared to single-sourcing procurement strategies.<sup>183</sup>

### *B. Economies of Scale*

Where the provision of a good or service is subject to economies of scale, CDS may require that the government pay more per unit. This is more likely to be the case when high fixed costs are involved. If, for example, a vendor must invest in new tooling to produce a good that meets the government's specifications, then the unit price it charges will account for those fixed costs. Accordingly, if the government dual sources, then both vendors must invest in the new tooling, and the government must pay twice the fixed costs, as reflected in a higher unit price.<sup>184</sup> By requesting alternate bids—for example, one bid for the full amount and another for fifty percent of the full amount—the government can evaluate the incremental cost of CDS, and for certain goods and services with high fixed costs, an increased cost of a certain amount could justify a waiver of the CDS requirement.

However, even for goods and services with high fixed costs relative to marginal costs, the procurement can be designed to minimize increased acquisition costs. For example, the government may be able to increase the size of its order to accommodate its needs for the next three years instead of one year, thereby reducing the per-unit share of each vendor's fixed costs.<sup>185</sup> Furthermore, because dual sourcing reduces the risk to the government of entering into a longer-term contract, the government can enter into a longer-term agreement than with a single source. If a longer-

---

<sup>183</sup> Lyon, *supra* note 19, at 246.

<sup>184</sup> For example, if fixed costs equal \$100 and marginal costs equal \$1, then a single vendor's cost to produce 100 units equals \$200. If each of two vendors must invest \$100 in fixed costs, each vendor must expend \$150 in production costs to produce 50 units, for a total production cost of \$300. The unit price is thus 50% higher with CDS.

<sup>185</sup> Returning to the example in the above note, suppose the government orders 300 units instead of 100. To produce 150 units, each vendor expends \$250 (\$100 fixed costs plus \$1 for each of 150 units), for a total of \$500 for the 300 units. A single vendor would expend \$400 (\$100 fixed costs plus \$1 for each of 300 units). The per-unit price is thus 25% higher with CDS—half of that with an order of 100 units.

term CDS contract is compared to a shorter-term single-sourced contract, the government's per-unit cost may actually be lower with CDS, even where fixed costs are high.<sup>186</sup>

In other situations, where the economies of scale may be so great that splitting the order between two vendors cannot be justified in any event, CDS may nonetheless be implemented by selecting a backup contractor. By awarding the entire order to a single vendor, economies of scale are preserved, but the existence of a backup contractor provides the government with a more effective remedy should the initial vendor encounter difficulties. Although switching to the backup vendor would still require an investment in new fixed costs because no two firms will be performing at the same time, some of the first firm's contract-specific investments can be transferred to the backup firm, thereby avoiding the need to pay fixed costs twice.<sup>187</sup> And in any case, paying again for the fixed costs is still a less expensive switch than would be the case under single sourcing, where the government pays again for the fixed costs, plus the costs of a new procurement and contract negotiation, plus the costs of the associated delays.

### *C. Collusion and Sabotage*

Many, although not all,<sup>188</sup> of the benefits of CDS rely upon competition between the two vendors. Those benefits may not fully materialize if there is too little competition (i.e., the vendors collude), or if there is too much competition (i.e., the vendors turn to sabotage or other harmful conduct). However, these potential breakdowns in competition can be minimized through appropriate contract design and, in any case, are un-

---

<sup>186</sup> Using the above example, the cost of procuring 100 units from a single source is \$200, so the per-unit cost is \$2. See *supra* note 184. The cost of procuring 300 units from two sources is \$500, see *supra* note 185, so the per-unit cost is \$1.66, less than the shorter-term, single-source alternative.

<sup>187</sup> For example, where a firm invests in creating new software to perform a contract, the government might require that the software code be kept in escrow, to be transferred to the government in the event of a termination. See Virginia Information Technologies Agency Procurement Manual § 27.5.5, [http://www.vita.virginia.gov/uploadedfiles/VITA\\_Main\\_Public/SCM/Procurement\\_Manual/Chapter\\_27/SCM\\_Chapter27.pdf](http://www.vita.virginia.gov/uploadedfiles/VITA_Main_Public/SCM/Procurement_Manual/Chapter_27/SCM_Chapter27.pdf) [https://perma.cc/MDJ8-M56H] (explaining that the use of a source code escrow protects the agency from vendor default).

<sup>188</sup> Even if the firms collude and therefore do not monitor each other's work and incentivize peak performance, the government still gains the benefit of having a preselected firm to take over the entire contract if, for example, the other closes up shop or commits a unique breach.

likely to undermine the benefits of CDS in any particular case, let alone in the aggregate.

There are several opportunities for collusion in any government-contracting scenario. For example, firms can collude with each other when preparing their bids in order to keep prices high or otherwise deprive the government of the benefit of competition.<sup>189</sup> Individual firms can also collude with government officials, promising kickbacks in exchange for contract awards, change orders, or other favorable treatment.<sup>190</sup> CDS creates yet one more opportunity for collusion—between the two firms during contract performance—that would not otherwise exist.

However, colluding in connection with a government contract is a federal crime (even for subnational procurements) with severe penalties, including both criminal penalties and regulatory prohibitions on future government contracts.<sup>191</sup> That does not mean that collusion never occurs (it does),<sup>192</sup> but the threat of a federal prosecution is a real deterrent.<sup>193</sup> Although political connections between government officials and their vendors stand in the way of a government accusing its own contractors of collusion, the Department of Justice is not similarly connected to the

---

<sup>189</sup> See U.S. Dep't of Justice, Price Fixing, Bid Rigging, and Market Allocation Schemes: What They Are and What to Look For 2, <http://www.justice.gov/atr/public/guidelines/211578.htm> [<https://perma.cc/KV6L-SZSM>].

<sup>190</sup> See W. Michael Kramer, The Most Common Procurement Fraud Schemes and Their Primary Red Flags, Int'l Anti-Corruption Res. Ctr. (Mar. 6, 2012), <http://iacrc.org/procurement-fraud/the-most-common-procurement-fraud-schemes-and-their-primary-red-flags/> [<https://perma.cc/BD68-WTTN>].

<sup>191</sup> See U.S. Dep't of Justice, *supra* note 189, at 1 ("Violation of the Sherman Act is a felony punishable by a fine of up to . . . \$100 million for corporations and \$1 million for individuals, and the maximum Sherman Act jail sentence is 10 years. Under some circumstances, the maximum potential fine may be increased above the Sherman Act maximums to twice the gain or loss involved. In addition, collusion among competitors may constitute violations of the mail or wire fraud statute, the false statements statute, or other federal felony statutes, all of which the Antitrust Division prosecutes. In addition to receiving a criminal sentence, a corporation or individual convicted of a Sherman Act violation may be ordered to make restitution to the victims for all overcharges. Victims of bid-rigging and price-fixing conspiracies also may seek civil recovery of up to three times the amount of damages suffered.")

<sup>192</sup> See, e.g., *United States v. Soper*, Trade Reg. Rep. (CCH) 10997952 (E.D.N.Y. Apr. 17, 2008) (summarizing guilty plea to charges of bid rigging for U.S. Navy contracts).

<sup>193</sup> Prosecutors also create strong incentives for colluders to turn on each other, such as granting amnesty from prosecution and fines to the first colluder to come forward and cooperate with the prosecution. See U.S. Dep't of Justice, Frequently Asked Questions Regarding the Antitrust Division's Leniency Program and Model Leniency Letters (Nov. 19, 2008), <http://www.justice.gov/atr/public/criminal/239583.htm> [<https://perma.cc/LJ4F-UH8L>].

local vendor. Collusion is often difficult to prove,<sup>194</sup> but the scarcity of collusion claims raised in administrative bid protests, where losing bidders have the ability to throw up as many accusations as they can muster and hope something will stick, suggests that it is generally well deterred.<sup>195</sup>

Furthermore, the incentives for private firms to collude under CDS can be addressed by adjusting the gains and losses associated with a firm's performance. So long as each firm could gain more by obtaining a contract for the entire scope of services than it could by cutting corners for half, then each firm will have an incentive to breach any collusive agreement, to the benefit of the public. And if the distribution of work under dual contracts is always subject to change,<sup>196</sup> collusion is unlikely to result in a stable equilibrium between the two vendors. Furthermore, the contract can be divided amongst more than two firms in situations where coordinated behavior is anticipated to be a problem.<sup>197</sup> Research on oligopolies indicates that, although collusion sometimes occurs in duopolies, it almost never occurs when the market is controlled by three or more firms.<sup>198</sup>

---

<sup>194</sup> See U.S. Dep't of Justice, *supra* note 189, at 1–2, 4–5 (describing various indicators of collusion, but cautioning that the indicators can in certain situations also be explained by innocent conduct).

<sup>195</sup> For example, only seven of the 2,841 administrative bid-protest decisions published by the U.S. Government Accountability Office on its website appear to involve any accusation of collusion (based on keyword searches performed on April 12, 2016), [http://www.gao.gov/legal/bid-protests/search?rows=10&now\\_sort=title\\_sort+asc&page\\_name=bid\\_protest\\_decisions&changed=1&path=Legal%3ABid+Protest%3ABid+Protest+Decision&facts=&adv\\_begin\\_date=03%2F07%2F1945&adv\\_end\\_date=03%2F11%2F2016&o=0&q=collusion#search](http://www.gao.gov/legal/bid-protests/search?rows=10&now_sort=title_sort+asc&page_name=bid_protest_decisions&changed=1&path=Legal%3ABid+Protest%3ABid+Protest+Decision&facts=&adv_begin_date=03%2F07%2F1945&adv_end_date=03%2F11%2F2016&o=0&q=collusion#search) [<https://perma.cc/55CB-VR3T>]. Similarly, of the 153 bid-protest decisions of the New York State Comptroller posted in its online database, only one appears to have involved a claim of collusion (based on keyword searches performed on April 12, 2016), <http://www1.osc.state.ny.us/Contracts/decisionsearchresult.cfm?m1=1&y1=1995&m2=12&y2=2016&p=&e=&w=collusion&order=2&sort=ASC&Search=Search> [<https://perma.cc/C4KS-SMJF>]. See *In re Strates Shows, Inc.*, File No. SF-20140222 (June 24, 2014), <http://www1.osc.state.ny.us/Contracts/decisionfile.cfm?ID=130> [<https://perma.cc/Z32J-7QQU>].

<sup>196</sup> See Subsection II.B.6 for a discussion regarding the “stickiness” of the initial allocation of work.

<sup>197</sup> This may be the case, for example, where incremental shifts are not possible and firms therefore have less to fear from poor performance, and where firms can realize substantial savings from reductions in service that are difficult to monitor.

<sup>198</sup> Steffen Huck et al., *Two Are Few and Four Are Many: Number Effects in Experimental Oligopolies*, 53 *J. Econ. Behav. & Org.* 435, 440–44 (2004) (surveying the literature and confirming through computerized experiments that it is difficult to achieve collusion in markets with more than two firms).

On the other end of the spectrum, if firms are *too* competitive, they might turn to sabotage or other detrimental conduct. The building of the First Transcontinental Railroad, where each firm's drive to outbuild the other led to terrible labor abuses, is an example of too much unconstrained competition.<sup>199</sup> It is also possible to envision one firm sabotaging the work of its competitor. However, harmful behavior of this type can be addressed through appropriate contractual requirements (such as fair-labor safeguards), the threat of criminal penalties for destruction of government property, and the ability to seek recourse through the government (i.e., alerting the government to the other firm's misconduct and seeking a switch) or through the courts (e.g., bringing an action in tort against the misbehaving contractor). Furthermore, although sabotage is a theoretical concern, it does not appear to have occurred in any contemporary example of dual sourcing, suggesting that, like collusion, it is not a significant concern in practice.

#### *D. Waiver of Competitive Dual Sourcing*

There will be limited situations where CDS cannot be implemented in any form. For example, government procurement regulations do not require competitive bidding where only one firm can provide the required good or service,<sup>200</sup> and CDS similarly cannot be implemented when only one source exists. As is ordinarily the case, other firms must remain able to challenge the government's determination that only one source exists, thereby ensuring that the exception cannot be used to nullify the rule.<sup>201</sup>

Even when multiple sources are available, there will be situations where CDS is not in the government's best interest. Where the government is purchasing an off-the-shelf commercial product warranted by the manufacturer, then CDS is unlikely to provide any significant oversight benefits. And if the product is also available off the shelf from multiple competing manufacturers, then dual sourcing is unlikely to provide any substantial remedial benefits. In such a situation, and particularly if the administrative costs of dual sourcing are high relative to the contract value, then single sourcing is the more efficient path. Requiring

---

<sup>199</sup> See *supra* notes 133–34 and accompanying text.

<sup>200</sup> See FAR 6.302–1 (2014) (identifying situations where only a single firm can meet the agency's requirements as exempt from full and open competition).

<sup>201</sup> See, e.g., *In re Raytheon Co. & Kongsberg Def. & Aerospace AS*, B-409615, 1, 5 (Comp. Gen. June 24, 2014).

two contractors when CDS provides little or no benefit would not serve the public good, and an ex ante waiver of any dual-sourcing requirements should therefore be permitted in this and similar situations, again subject to challenge by the excluded firm.

There are also likely to be situations where the inefficiency or impossibility of dual sourcing can be determined only ex post, after bids have been received and ranked. The government may only receive qualified bids from two manufacturers using incompatible technologies, and if this is the case, then any dual-sourcing requirements would need to be waived in order to permit the procurement to go forward. Accordingly, procedures to waive a dual-sourcing requirement at the time of award should also be made available, with an appropriate opportunity for an administrative challenge to ensure that the exception is not overutilized.

#### CONCLUSION

This Article has framed the problem of poor contractor performance in public procurement contracts as a contract-remedies problem and offered CDS as a solution. Analyzed in the context of other remedies utilized by both the public and private sectors, and accounting for the institutional and regulatory structures that affect only the former, CDS is the best available remedy for government contracts and should be implemented widely.

Because a contract can be divided among any number of possible dimensions—including geography, function, or even time—CDS can be implemented in nearly all government contracts. Furthermore, there is no tension between implementing CDS as a contract remedy and the public-accountability approaches to outsourcing that have been promoted by other scholars. In fact, CDS can itself enhance public accountability by incentivizing the production of public information. Of course, CDS has costs, and sometimes those costs will outweigh its benefits. While not a panacea, CDS can provide the government with a much-needed effective, credible remedy and thereby incentivize full contractor performance for most public procurement contracts.