2-26-2018

Finding the Right Balance in Appraisal Litigation: Deal Price, Deal Process, and Synergies

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Abstract

This article examines the evolution of Delaware appraisal litigation and concludes that recent precedents have created a satisfactory framework in which the remedy is most effective in the case of transactions where there is the greatest reason to question the efficacy of the market for corporate control, and vice versa. We suggest that, in effect, the developing framework invites the courts to accept the deal price as the proper measure of fair value, not because of any presumption that would operate in the absence of proof, but where the proponent of the transaction affirmatively demonstrates that the transaction would survive judicial review under the enhanced scrutiny standard applicable to fiduciary duty-based challenges to sales of corporate control. We also suggest, however, that the courts and expert witnesses should and are likely to refine the manner in which elements of value (synergies) should, as a matter of well-established law, be deducted from the deal price to arrive at an appropriate estimate of fair value.

I. INTRODUCTION

Facilitated largely by "appraisal arbitrage" – the practice of purchasing shares of stock after announcement of a merger, with a view to exercising the statutory right to an award of "fair value" in lieu of the merger price – the once-discredited appraisal remedy has become a significant phenomenon in shareholder litigation.[2] That development has generated competing claims that appraisal arbitrage should be prohibited because it unduly deters bids, or should be

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[2] *See* Part II.A below.

encouraged as an incentive to bidders to pay fair value.[3] Increased use of the appraisal remedy has also engendered a parallel debate about the role of the merger price in determining fair value: one school of thought posits that the merger price (or deal price) should presumptively be taken to reflect fair value; the opposing school holds that such a "market price rule" harms target company stockholders and should be rejected.[4]

We submit that the Delaware courts are developing a middle ground point of view with respect to these parallel debates. On one hand, the courts have continued to affirm that the practice of appraisal arbitrage is legally permissible under the governing statutory framework, and the Delaware legislature has done nothing to undermine that view.[5] On the other hand, the courts' increasing reliance on the deal price to measure fair value has undoubtedly circumscribed the incentive to engage in appraisal arbitrage, at least in cases in which such reliance is most likely to occur.[6]

We support this middle ground point of view, and suggest two significant refinements that would clarify the operation of the appraisal remedy. First, we suggest that the Delaware courts' treatment of the use of the deal price to determine fair value does and should mirror the treatment of shareholder class action fiduciary duty litigation. In the case of a sale of corporate control, in which the Delaware statute affords appraisal rights,[7] the governing standard of judicial review requires "enhanced scrutiny" to determine the reasonableness of the sale process.[8] That same form of judicial review could usefully be applied to determine when the deal

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[3] *See* Part II.B below.
[4] *See* Part III.B.2.a below
[5] *See* Part II.A below.
[6] *See* Part III.B.1.c below.
[7] Tit. 8, DEL. CODE ANN., § 262 ("Section 262").
[8] *E.g., QVC Network v. Paramount Communications*, 635 A.2d 1245, 1268 n. 44 (Del. 1993) ("The enhanced scrutiny required by *Revlon* [*Inc. v. MacAndrews & Forbes Holdings, Inc*., 506

price should be used to measure fair value: where the proponents of the deal satisfy that form of review, such use of the deal price is appropriate; and where they don't, it's not.[9]

Second, we further suggest that reliance on the deal price, without further inquiry, inappropriately creates a no-lose proposition for appraisal arbitrage.[10] It also fails to give effect to well-settled judicial interpretation of the appraisal statute, under which elements of value reflected in the deal price must be deducted to arrive at fair value if they involve value (synergies) that can be achieved only as a result of the merger.[11] Case law and finance literature are sparse, however, in their treatment and quantification of an appropriate deduction for synergies, and we suggest that refinement of that treatment is likely, as deal price comes to play a more regular role in the establishment of fair value.

We develop the foregoing suggestions in the following manner. In Part II, we describe the growth of appraisal arbitrage and the use of the appraisal remedy, and we briefly recount and comment on the debate about the utility of appraisal arbitrage. In Part III, we begin with consideration of a possible statutory change to address concerns about appraisal arbitrage, but find that approach impractical and unlikely to occur. We then consider an approach involving refinement of the standards for determining fair value in appraisal litigation. In that regard, we

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A.2d 173 (Del. 1986)] imposes upon the directors the burden of showing the reasonableness of their conduct.").

[9] Where the proponent of the transaction fails to establish the reasonableness of the sale process, it may still be appropriate for the court to take the deal price into account in some manner, such as a corroborative check on the results of other valuation techniques. *See, e.g.*, *In re Appraisal of Dell, Inc.*, 2016 Del. Ch. LEXIS 81, *148 (Del. Ch. May 31, 2016), *rev'd sub nom. Dell, Inc. v. Magnetar Global Event Driven Master Fund Ltd.,* [2017 Del. LEXIS 518,] _ A.3d __ (Del. 2017) ("The market data is sufficient to exclude the possibility, advocated by the petitioners' expert, that the Merger undervalued the Company by $23 billion").

[10] "No-lose" is admittedly a loose characterization: legal and expert witness fees must usually be borne by dissenting stockholders, and may or may not exceed the benefit of relatively high pre-judgment interest on what is essentially an intermediate duration debt claim against the corporation surviving the merger. *See* text at notes [170-171] below.

[11] *See* Part IV.A below.

review the evolution of the role of deal price and the parallel evolution of the use of discounted cash flow (DCF) analysis in appraisal litigation. We then briefly outline the academic debate about the relative merits of these two valuation approaches, including the debate about the possibility of a "market price rule" in which deal price is presumptively determinative of fair value. We conclude Part III with an assessment of the standards by which the courts do and should take deal price into account in determining fair value.

In Part IV, we review how the courts in appraisal litigation have addressed the treatment of synergistic elements of value in the deal price. Acknowledging the legal proposition that such elements must be excluded in determining fair value, we next review how such elements ought to be identified. At that point, we review possible approaches for determining the extent of such synergistic gains, and for determining how such gains might be allocated between acquirers and target company stockholders. We conclude Part IV with the observation that these approaches to synergies are not fully developed in the case law or finance literature, and suggest that law and finance practitioners and the Delaware courts are likely to devote increased attention to refining those approaches.

II. APPRAISAL ARBITRAGE: HISTORY AND CRITIQUES

A. The Legal Framework for, and Growth of, Appraisal Arbitrage

Although the Delaware appraisal statute is not altogether explicit on the point, it has long been recognized that someone who buys shares after the announcement of the terms of a merger is nonetheless entitled to seek appraisal with respect to those shares – *i.e.*, engage in "appraisal arbitrage" – as long as the person complies with the formal requirements of the appraisal statute.[12] Although this recognition is frequently traced back to the *Transkaryotic* opinion in 2007, the Delaware Court of Chancery first acknowledged the right of post-announcement purchasers to seek appraisal nearly twenty years earlier.[13]

The practice of engaging in appraisal arbitrage did not emerge on a large scale, however, until after 2007, but when it did, the previously inhospitable and relatively rarely used appraisal remedy became a hot litigation commodity: as vividly illustrated by a bar graph presented by Subramanian, "appraisal has gone from a trickle in 2009 to approximately $2.0 billion in face value of claims in each of 2015 and 2016."[14] Much of this growth has been driven by specialized players in the appraisal arbitrage field, one of whom (Merion Capital) by itself accounted for 36% of the face value of all appraisal claims during the measurement period (2009-2016).[15]

B. The Appraisal Arbitrage Debate

The phenomenon of appraisal arbitrage has generated considerable controversy, which we review here only briefly. Some of the criticism of the practice takes an almost morals-based tone. Early on, it was argued that the practice was inequitable, much like the purchase of stock to

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[12] *In re Appraisal of Transkaryotic Therapies, Inc.*, 2007 Del. Ch. LEXIS 57 (Del. Ch. May 2, 2007).

[13] *Salomon Bros., Inc. v. Interstate Bakeries Corp.*, 576 A.2d 650 (Del. Ch. 1989); *cf.* Guhan Subramanian, *Using Deal Price to Determine "Fair Value" in Appraisal Proceedings*, at 2, *available at* http://www.hbs.edu/faculty/Publication%20Files/20170206_Subramanian-draft_9aa5b475-ed61-4fae-8b39-9b2de9d09425_78008941-390f-458a-a0e0-92863f300dc8.pdf (*Transkaryotic* "opened the way for appraisal arbitrage"). One of the authors represented Salomon Brothers in this case. *Transkaryotic* addressed and rejected one argument not raised in *Interstate Bakeries*, namely the claim that a post-announcement purchaser should be required to demonstrate that its shares, held in fungible bulk in the name of a depository nominee, were not voted in favor of the merger.

[14] Subramanian, note [ ] above, at 2.

[15] *Id.* at 10.

bring a derivative suit based on a preexisting wrong to the corporation.[16] According to seven highly respected corporate law firms, the practice of appraisal arbitrage is downright "unseemly."[17] Conversely, criticism of appraisal arbitrage invokes the claim – consistently rejected by the Delaware courts – that appraisal rights were intended only for the benefit of pre-announcement holders, and should not be construed to extend to post-announcement purchasers.[18] In response to these legal or moral arguments, supporters of appraisal arbitrage argue that purchasing shares after the deal is announced, in order to exercise appraisal rights, is no more unseemly or inequitable than widely accepted practices of trading other financial or contractual claims.[19] Those supporters have consistently won the formal legal argument, with the

[16] *Salomon Brothers*, 576 A.2d at 653-654 (respondent "contends that Salomon's position is the same as that of a stockholder who attempts to bring a derivative suit complaining of wrongs that pre-date the stockholder's first purchase of stock.").

[17] Letter to the Council of the Delaware State Bar Association Corporation Law Section, from Cravath Swaine & Moore LLP, Davis Polk & Wardwell LLP, Latham & Watkins LLP, Skadden Arps Slate Meagher & Flom LLP, Simpson Thacher & Bartlett LLP, Sullivan & Cromwell LLP, and Wachtell Lipton Rosen & Katz, Apr. 1, 2015, *available at* [] (denying appraisal rights to post-announcement purchasers "would … reduce the unseemly claims-buying that is rampant and serves no legitimate equitable or other purpose, but threatens to undermine transactional certainty and reduce value to shareholders of Delaware corporations as acquirers, particularly in leveraged transactions, may be forced to factor the enhanced appraisal risk into their calculations.").

[18] Richard A. Booth, *The Real Problem With Appraisal Arbitrage*, 72 BUS. LAW. 325 (2017) ("the appraisal remedy is widely seen as intended to protect existing stockholders who are (or will be) forced to sell their shares in the merger"); *Salomon Brothers*, 576 A.2d at 651-652 ("IBC's primary argument is that the appraisal statute was not designed to protect those who wish to speculate on a judicial remedy and that Salomon acted in bad faith by purchasing shares with notice of the merger and then demanding appraisal. … Th[e] history of our appraisal statute does not support IBC's argument that the statute was designed to protect only those stockholders who purchased their shares prior to the announcement of a merger. Rather, its purpose was to replace the stockholder's veto power with a means of withdrawing from the company at a judicially determined price.").

[19] Council of the Corporation Law Section of the Delaware State Bar Association, *Explanatory Paper* (Mar. 16, 2015), at 2, *available at* https://www.lowenstein.com/files/upload/DGCL%20262%20Proposal%203-6-15%20Explanatory%20Paper.pdf ("The assignment and acquisition of financial claims (in contrast to tort claims) generally has been accepted historically and presently as lawful and

courts holding that the words and history of the appraisal statute support the practice of appraisal arbitrage.[20] In sum, we see no basis in existing statutes or precedent to conclude that appraisal arbitrage offends some well-established moral or legal precept.

Other criticisms of appraisal arbitrage rely more on economic analysis. It has been suggested, for example, that appraisal arbitrageurs unfairly benefit from a "free option" to take advantage of information arising after the announcement of the deal.[21] Critics also contend that

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consistent with public policy."), *citing* 6 *Del. C.* § 2702 (assignees of bonds, specialties and notes may enforce in their own name); 10 *Del. C.* § 3902 (assignees of contracts may enforce in their own name); Lauren D. Gojkovich, *Leveraging Litigation: How Shareholders Can Use Litigation Leverage to Double Down on Their Investment in High Stakes Securities Litigation*, 16 STAN. L.J. BUS. & FIN.100, 111 (2010). *See also* Eric Winston, *Understanding The Reasons Traders Buy Bankruptcy Claims*, Law 360 (Jan. 8, 2014), *available at* https://www.law360.com/articles/498711/understanding-the-reasons-traders-buy-bankruptcy-claims ("it is common in 'mega' Chapter 11 cases to see on the docket hundreds, if not thousands, of 'claims transfer notices' filed pursuant to Federal Rule of Bankruptcy Procedure 3001(e), and that is only a small set of the claims trading activity.").

[20] *Salomon Brothers*, 576 A.2d at 652 ("If appraisal rights were granted as the *quid pro quo* for the loss of veto power, there is no apparent reason why all stockholders who formerly could have exercised that veto power should not now be able to exercise appraisal rights"); *Transkaryotic*, 2007 Del. Ch. LEXIS 57 at *10-11 ("Must a beneficial shareholder, who purchased shares *after* the record date but before the merger vote, prove, by documentation, that each newly acquired share (*i.e.,* after the record date) is a share not voted in favor of the merger by the *previous* beneficial shareholder? The answer seems simple. No. Under the literal terms of the statutory text and under longstanding Delaware Supreme Court precedent, only a record holder, as defined in the DGCL, may claim and perfect appraisal rights. Thus, it necessarily follows that the record holder's actions determine perfection of the right to seek appraisal.").

[21] Gaurav Jetley & Xinyu Ji, *Appraisal Arbitrage—Is There a Delaware Advantage?*, 71 BUS. LAW. 427, 433-441 (2016); Trevor S. Norwitz, *Delaware Legislature Should Act to Curb Appraisal Arbitrage Abuses*, CLS BLUE SKY BLOG (Feb. 10, 2015), *available at* http://clsbluesky.law.columbia.edu/2015/02/10/delaware-legislature-should-act-to-curb-appraisal-arbitrage-abuses/ ("the fact that the relevant appraisal valuation date is the closing of a transaction, rather than the time of announcement of the deal or the shareholder vote … gives the appraisal arbitrageur a free option on positive developments between signing and closing."); *New Activist Weapon – The Rise of Delaware Appraisal Arbitrage: A Survey of Cases and Some Practical Implications*, FRIED FRANK: M&A BRIEFING (Jun. 18, 2014), at 2, *available at* http://www.friedfrank.com/siteFiles/Publications/FINAL%20-%206182014%20TOC%20Memo%20-%20New%20Activist%20Weapon--%20The%20Rise%20of%20Delaware%20Appraisal%20Arbitrage.pdf ("With this timing advantage, investors can review information in the company's proxy statement relating to its sale

appraisal arbitrage creates a post-closing risk for buyers that will result in reduced deal prices, as bidders hold back a reserve to deal with post-closing appraisal claims of uncertain magnitude.[22] It has also been suggested that appraisal arbitrageurs, as the beneficiaries of appraisal awards, divert value to themselves from the pre-existing holders from whom they purchase shares.[23] We are at best skeptical of these claims, however. The "free option" described by critics is unlikely to have any substantial value in all but the most unusual case, and is not likely to have provided the incentive for appraisal arbitrage.[24] Likewise, the claim that appraisal arbitrage reduces deal prices appears to be inconsistent with, or at least unsupported by, empirical research.[25] Finally, there is at least some empirical support for the assertion that appraisal arbitrage not only solves a

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process and fairness of the price, can assess any pre-closing shareholder litigation that has been commenced, and can evaluate market, industry and target company conditions at a time much closer to the merger closing date (as of which time the court will determine fair value in an appraisal proceeding) as compared to the time when the deal price was negotiated and then voted on.")

[22] Norwitz, note [] above ("buyers will just respond to the new wave of appraisal arbitrage with lower purchase prices, as they feel the need to hold something back for the likely appraisal 'grab'").

[23] Jay B. Kesten, *The Uncertain Case for Appraisal Arbitrage*, 52 WAKE FOREST L. REV. 89, 92 (2017) ("Rational acquirers that anticipate appraisal proceedings, even in marginal cases, will self-insure against appraisal outlays by offering less for their acquisitions, thereby transferring value from target shareholders as a class to the minority who dissent.").

[24] Booth, note [ ] above, at 328 ("the suggestion that arbs may capture the benefit of new information that indicates a higher value for the subject company misconstrues how the appraisal remedy works: It is almost impossible for any information revealed after a merger is announced to affect fair price as determined by an appraisal court."). *Transkaryotic* may be the rare case in which that scenario actually occurred. *See* George S. Geis, *An Appraisal Puzzle*, 105 NW. L. REV. 1635, 1638-1639 (2011) (noting that "overwhelmingly positive" test results on a new drug arrived after the announcement of the merger but before the merger vote and the closing date).

[25] Audra Boone, *et al.*, *Merger Negotiations in the Shadow of Judicial Appraisal*, Sep. 30, 2017 working paper, at 3, *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3039040 ("none of our models suggest that bidders lower their offer price in response to heightened threat of dissenters asserting appraisal"); *cf*. Charles R. Korsmo & Minor Myers, *Appraisal Arbitrage and the Future of Public Company M&A*, 92 WASH. U. L. REV. 1551, 1555 (2015) ("appraisal petitioners target transactions with lower deal premia and also going-private transactions, where minority shareholders are most likely to face expropriation.").

collective action problem facing disaggregated pre-announcement stockholders in seeking appraisal,[26] but also results in increased prices for their stock.[27]

On balance, we conclude that appraisal arbitrage is an inapt target for unqualified criticism or accolades: it simply makes the appraisal remedy viable in the case of a public company merger where potentially dissenting shares are widely dispersed. If appraisal arbitrage is a bad thing, it is only because and to the extent that the appraisal remedy is allowed to operate in a manner that is inefficient.[28] If a viable appraisal remedy creates problems or inefficiencies, the debate should be about how to define where that remedy is available and what valuation principles should apply. And that definition, we believe, should be shaped in a manner that encourages (or at least permits) appraisal arbitrage where the remedy is useful, and discourages appraisal arbitrage where it is not useful.

Determining whether the appraisal remedy is "useful," of course, requires an articulation of what purpose the remedy should serve. In this regard, we find it hard to improve on what Vice Chancellor Sam Glasscock III recently described as "ruminations" about the appraisal remedy:[29]

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[26] Korsmo & Myers, note [ ] above, 92 WASH. U. L. REV. at 1555-1556 (2015) ("By buying up large positions after the announcement of a transaction, arbitrageurs can overcome the collective action problems that would otherwise render appraisal ineffective.").

[27] Boone, *et al*., at 20-21 (absence of an arbitrage spread in deals targeted by appraisal litigation "implies that some of the gains from merger arbitrage … are shared with passive investors."); *see also* Scott Callahan, *et al.*, *Appraisal Arbitrage and Shareholder Value*, (Nov. 9, 2017 working paper), at 5, *available at* [ ] ("deal premia are discernibly higher in appraisal eligible transactions (even after controlling for the tax status of the deal).").

[28] As a member of the Delaware Court of Chancery with considerable experience with appraisal litigation has noted, "appraisal arbitrage is no better or worse than the underlying appraisal cause of action: whether that action promotes efficiency or not, the effect — good or ill — is simply magnified by the availability of arbitrage." Hon. Sam Glasscock III, *Ruminations on Appraisal*, DEL. LAW. 29 (Summer 2017).

[29] *Id*. at 8. Much other ink has been spilled in the effort to divine the purpose of the appraisal remedy. *E.g.*, Thompson, note [ ] above.

- "The reason for appraisal must be sought, I think, in terms of efficient capital markets, not fairness."[30]
- Because "few people would invest in equity ownership subject to squeeze-out [by controlling stockholders] at an unfair price … [c]reating conditions that encourage investment … requires a judicial appraisal, using valuation techniques, in the squeeze-out or 'classic' appraisal situation."[31]
- In contrast, "I find little to recommend extending an appraisal right to dissenters in the case of a 'clean' merger"[32] – which he defines as one "where the stock is readily transferable, approved by a disinterested board independent of any controller or other conflict, and where the sale is consummated after an exposure to the market."[33]
- "To believe … [that] efficiency requires appraisal with respect to a clean merger, one must also believe a number of subsidiary propositions," namely that:
    - "[A]n entity has an objective, inherent value" that "is potentially higher than will be developed by a sale with market exposure."
    - "[T]he inherent value of an acquired entity is higher than the stand-alone value of the company as determined (presumably erroneously) by its informed fiduciaries, who must approve the sale."
    - "[A] bench judge, armed with self-serving expert testimony from the parties, is a more reliable diviner of inherent value than the market and the directors."[34]

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30 Glassock, note [ ] above, at 9.
31 *Id.*
32 *Id.* at 10.
33 *Id.* at 8.
34 *Id.*

To this list of prerequisites of the use of appraisal in "clean" mergers, we would add the proposition that such "inherent value" exceeds the value approved (presumably erroneously) by a majority in interest of the persons (the stockholders) holding the economic interest in the enterprise. The Vice Chancellor describes these propositions as "more or less unlikely,"[35] and concludes that that it is "unlikely that a lack of appraisal rights [in respect of "clean" mergers] would dissuade investment."[36]

III. REFINING THE APPRAISAL REMEDY TO PROMOTE EFFICIENCY

A. A Possible Statutory Solution

If that assertion by the Vice Chancellor is correct, and the availability of appraisal rights in "clean" mergers carries with it countervailing costs and risks, the most logical reform is simply to eliminate appraisal rights in that setting. Indeed, the Model Business Corporation Act adopts such an approach in the case of publicly traded stock by eliminating appraisal rights unless the merger constitutes an "interested transaction,"[37] which it defines (phrased in a somewhat oversimplified way) as a merger "involving" a holder of over 20% of the voting stock, someone with power to name 25% or more of the board, or, in certain cases, a senior executive who is to receive a side benefit in the merger.[38] Delaware's statute, in contrast, makes no distinction between interested transactions and "clean" mergers, conferring appraisal rights (or not) instead depending on the form of merger consideration.[39] Thus, if the goal of appraisal is to provide a check against deprivation of value due to conflict of interest, Delaware's statute is both

[35] *Id.* at 10.
[36] *Id.* at 11.
[37] MODEL BUS. CORP. ACT (2016 Revision) §13.02(b)(4).
[38] *Id.*, §13.01 (defining "interested transaction").
[39] Section 262(b) (denying appraisal rights for widely held or traded shares, but restoring such rights if the merger consideration is cash).

overinclusive and underinclusive: it is overinclusive because it provides appraisal rights in a cash merger negotiated at arm's length and approved by a disinterested board of directors and a majority of disinterested stockholders; it is underinclusive because it denies appraisal rights in the case of a merger unilaterally implemented by a publicly traded controlling stockholder (and its nominees on the board of directors) in which the minority stockholders receive shares of the controlling stockholder. Despite persistent criticism and suggestions for reform,[40] however, Delaware's appraisal statute has remained untouched in terms of its allocation of appraisal rights.

And even those who advocate an approach similar to the Model Act acknowledge the difficulty of defining an "interested transaction,"[41] or any other predictable dividing line between mergers in which appraisal is a valuable check on market imperfection and mergers in which the market can be trusted to provide a reasonable assurance that the transaction is delivering fair value. Should appraisal rights be excluded in a merger approved by directors, even if all disinterested, whose approval was the result of gross negligence? Where even disinterested directors approve a deal based on a pre-signing market check was demonstrably deficient in identifying likely bidders, and the merger was shored up by unusually strong deal protections?

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[40] Most recently, senior Delaware practitioner David McBride has urged that appraisal rights for public company shares be limited to "interested transactions," which "would be defined to capture those situations in which the officers, directors or a majority of the stockholders have an interest that conflicts with that of the dissenting stockholders."
David C. McBride, *Rebalancing the Merger Litigation Landscape*, DEL. LAW. 24, 25-26 (Summer 2017). Previous critiques of the Delaware statute's allocation of appraisal rights include Randall S. Thomas, *Revising the Delaware Appraisal Statute*, 3 DEL. L. REV. 1, 16-21 (2000), and Robert B. Thompson, *Exit, Liquidity, and Majority Rule: Appraisal's Role in Corporate Law*, 84 GEO. L.J. 1, 53-54 (1995).

[41] McBride, note [ ] above, at 26 ("The major disadvantage of this approach is the difficulty of statutorily defining 'interested transactions.' What conflicts and whose conflicts justify providing a valuation remedy?"). The Model Act provision itself suffers from an ambiguity in restoring appraisal rights where the transaction is one "involving an interested person." §13.01. The Official Comment explains only that "involving" "denotes participation beyond merely voting or participating on the same basis as other holders of securities of the same or a similar class or series."

Attempting to account for such situations through a statutory allocation of appraisal rights could bedevil statutory drafters for years to come.

B. An Alternative Approach Involving Judicial Valuation

The other avenue for limiting appraisal to where it can be most useful involves tailoring the principles for determining fair value in appraisal litigation. That avenue, which is the one we advocate, would employ an approach to determining fair value that: (1) promotes appraisal (and appraisal arbitrage) in cases where it represents a genuine check on a process for determining the merger price that lacks assurance that the price is fair – most obviously, where the price is proposed and imposed unilaterally by a controlling stockholder – and (2) discourages appraisal where the process for determining the merger price provides assurance that the price is fair. Refining judicial valuation approaches could obviate the need to engage in the development of a bright line, predictably applied statutory rule for determining whether appraisal rights exist. If those valuation approaches discourage the exercise of appraisal rights where the sale process is robust, the extension of appraisal rights to mergers not warranting significant judicial scrutiny is a problem more theoretical than real.[42]

With that proposition in mind, we turn to an examination of the development of the approach to appraisal that we advocate and, in fact, we have seen evolving in the Delaware cases in the last few years.

1. *Judicial Valuation History*

a. Defining "Fair Value" and Reliance on DCF Analysis

The use of deal price (or third party sale value) to determine fair value in appraisal proceedings has undergone a striking evolution over the last 40 years or so. Early in that time

[42] The authors acknowledge Stanley Keller as the source of this observation.

frame, it was petitioning stockholders who argued for use of the deal price, or the value of the company in a hypothetical sale or dissolution.[43] And it was appraisal defendants who resisted use of the deal price, on the theory that shareholders have no right in appraisal litigation to receive the value that was or could have been received in a third-party sale.[44] The defendants' arguments rested on both statute and case law: use of the deal price (or hypothetical third party sale value) would include elements of value (synergies) attributable to the accomplishment or expectation of the merger (or hypothetical merger), in violation of Section 262(h), and the case law's reference to fair value as a proportionate share of the value of the going concern precluded inclusion of value attributable to the value of control reflected in the deal price.

Interestingly, the Delaware courts managed to sidestep this controversy, mostly because they increasingly turned to discounted cash flow valuation techniques to determine fair value. As we have written, a valuation aimed at yielding the present value of future free cash flows of the subject firm is, at least theoretically, consistent with the case law definition of fair value as the value of the going concern.[45] By focusing solely on anticipated returns to the corporation itself, that valuation approach conveniently, and appropriately, enables the courts to avoid applying discounts of various sorts attributable to the nature or status of the dissenting shares (*e.g.*, a minority discount or a discount for lack of marketability), or premiums attributable to synergistic merger gains or gains achievable through consolidation of control.

As the courts became more comfortable with DCF analysis, however, something interesting happened. Contrary to the tenor of the debate in the 1970s and 1980s, when

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[43] Lawrence A. Hamermesh & Michael L. Wachter, *The Fair Value of Cornfields in Delaware Appraisal Law*, 31 J. CORP. L. 119, 155 (2005) ("*Cornfields*"), discussing *Bell v. Kirby Lumber Corp.*, 413 A.2d 137 (Del. 1980).
[44] *Id*. at 154 n. 140.
[45] Lawrence A. Hamermesh & Michael L. Wachter, *Rationalizing Appraisal Standards in Compulsory Buyouts,* 50 B.C. L. REV. 1021, 1043 (2009).

petitioners argued for deal price and respondents argued for less, courts applying DCF analysis increasingly arrived at valuations *greater* than the deal price. In some cases, this was not at all surprising: for example, where the deal price is established unilaterally in a freezeout by a controlling stockholder and, accordingly, the market for corporate control does not afford any corroboration of the deal price as fair value, a responsible DCF analysis may well result in a fair value in excess of the deal price. But, as it turned out, that sort of case was by no means the only circumstance in which a DCF-based fair value was found to exceed deal price. Increasingly, this outcome was observed in cases in which the court entertained some doubt about the efficacy of even a conflict-free sale process.

In 2004, for example, the Delaware Court of Chancery used DCF analysis to award an amount greater than the sale price of the company.[46] In so doing, the court directly confronted and rejected the respondent's claim that the merger price was at least as great as fair value because it was the product of "a 'thorough and fair' auction."[47] To the contrary, the court found that after the founder/director/1% stockholder of the firm made a bid, the subsequent sale process "likely did not include all potential bidders, was conducted quite hastily, and probably reduced the likelihood that all bidders would be fully apprised of the Company's current prospects."[48] The resulting fair value determination was $1.64 per share, about 60% higher than the $1.06 per share deal price.

In that same year (2004), the Court of Chancery similarly disposed of another appraisal case, in which the court used a DCF analysis to derive a fair value award of $24.65 per share,

[46] *Gholl v. eMachines, Inc.*, 2004 Del. Ch. LEXIS 171 (Del. Ch. Nov. 24, 2004), *aff'd*, 875 A.2d 632 (Del. 2005).
[47] *Id.* at *58.
[48] *Id.* at *61.

which exceeded the deal price of $20.44 by around 20%.[49] Despite noting that "as a general matter, an arms length transaction may be a good indicator of value," that the transaction at issue "was the product of arm's length negotiations," and that "there is no suggestion that the sales effort was not professionally handled," the court was nonetheless dissuaded from reducing the fair value award to a level at or below the deal price, due to a concession by the target's investment banker that the sales process was "desperate."[50]

These cases foreshadowed the result in the better-known, perhaps even notorious, litigation involving the acquisition of Dell by a private equity firm associated with Dell's founder Michael Dell. In that situation, the Court of Chancery found that despite the presence of Mr. Dell, a director and 16% stockholder, on the buy side, the sale process used by the special committee of independent directors was sufficient to "sail through" any challenge based on a claim of breach of fiduciary duty.[51] Finding a number of reasons to question the utility of the deal price as a measure of fair value, however, the court gave exclusive weight to a DCF valuation, and declined to give the deal price any weight "[b]ecause it is impossible to quantify the exact degree of the sale process mispricing."[52] Accordingly, the court set fair value at $17.62 per share, a 25% premium over the $13.75 per share deal price.[53]

The Court of Chancery's opinion in *Dell* may have been the high-water mark in a series of cases in which the Delaware courts have acknowledged the theoretical utility of reliance on

[49] *Cede & Co. v. MedPointe Healthcare, Inc.,* 2004 Del. Ch. LEXIS 124, *1-2 (Del. Ch. Aug. 16, 2004).
[50] *Id.* at *77 n. 107.
[51] *Appraisal of Dell,* 2016 Del. Ch. LEXIS 81, at *88.
[52] *Id.* at *168.
[53] *Id.* at *1, *51.

the deal price as an upper limit on fair value, but used DCF analysis to reach a fair value award substantially in excess of the deal price.[54]

b. Institutional Issues with DCF Analysis

Even as that series of cases unfolded, however, one could observe a countervailing trend in Delaware appraisal litigation. As the courts honed their technique in evaluating and applying discounted cash flow analyses, they became increasingly and visibly dismayed by the tendency of litigation experts to present "wildly divergent" DCF valuations.[55] Unconstrained by the demands of clients deciding to pay or receive real money in a negotiated commercial transaction based on DCF analysis, litigation experts could proffer such analyses pushing at "the outer limits of plausibility."[56] Despite justly deserved commendations for their sophistication and energy in

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[54] As discussed below (text at notes [-]), the Delaware Supreme Court reversed the Court of Chancery's valuation in *Dell*, sharply criticizing the failure to rely more heavily on market data, including the deal price.

[55] *Dunmire v. Farmers & Merchants Bancorp of Western Pa., Inc.*, 2016 Del. Ch. LEXIS 167, *80 (Del. Ch. Nov. 10, 2016). *See also Dell, Inc. v. Magnetar Global Event Driven Master Fund Ltd.*, _ A. 3d at _ [2017 Del. LEXIS 518, *69] ("As is common in appraisal proceedings, each party—petitioners and the Company—enlisted highly paid, well-credentialed experts to produce DCF valuations. But their valuations landed galaxies apart—diverging by approximately $28 billion, or 126%."); *In re ISN Software Corp. Appraisal Litigation,* 2016 Del. Ch. LEXIS 125, *2 (Del. Ch. Aug. 11, 2016) ("it is quite common for the petitioner's expert in an appraisal to reach a DCF value twice that arrived at by the respondent's expert"); *Longpath Capital, LLC v. Ramtron Int'l Corp.*, 2015 Del. Ch. LEXIS 177, *27 (Del. Ch. June 30, 2015) ("Much has been said of litigation-driven valuations, none of it favorable. Here, the parties have proffered widely disparate valuation numbers … ."); *In re Dole Food Co*., 114 A.3d 541, 557 (Del. Ch. 2014) ("In appraisal proceedings, the battling experts tend to generate widely divergent valuations as they strive to bracket the outer limits of plausibility."); *Finkelstein v. Liberty Digital, Inc.*, 2005 Del. Ch. LEXIS 53, *41 (Del. Ch. Apr. 25, 2005) ("Men and women who purport to be applying sound, academically-validated valuation techniques come to this court and, through the neutral application of their expertise to the facts, come to widely disparate results, even when applying the same methodology.").

[56] *Dole Food*, 114 A.3d at 557. The problem is not unique to Delaware appraisal litigation. *See* Kenneth Ayotte & Edward R. Morrison, *Valuation Disputes in Bankruptcy*, working paper (on file with authors) at 3 (in bankruptcy valuation proceedings, "the discounted cash flow (DCF) method is particularly susceptible to the kinds of manipulation that judges have difficulty evaluating. Because this method leans heavily on subjective assumptions that are difficult to test

evaluating those competing DCF claims,[57] the Delaware courts have repeatedly acknowledged a concern about institutional limitations on their ability to effectively sort out those "wildly divergent" financial analyses.[58]

And as those courts have explicitly noted, the result of DCF analysis is highly susceptible to wide swings based on seemingly small variations in the inputs to the analysis.[59] In one recent

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if not entirely untestable, we believe this method is not well-suited for adversarial litigation in a bankruptcy case. It may be best used as a last resort when more transparent approaches (surrounding market evidence, comparable transactions or comparable company multiples) are unreliable, and only when discount rates can be calculated using well-grounded approaches.").

[57] *E.g.*, Charles R. Korsmo & Minor Myers, *The deterrence value of stockholder appraisal*, in CLAIRE A. HILL & STEVEN DAVIDOFF SOLOMON, EDS., RESEARCH HANDBOOK ON MERGERS AND ACQUISITIONS, ch. 16, at 349 (Edward Elgar Publishing Ltd. 2016) ("the five members of the Court of Chancery are expert not only in the mechanics of valuation but also on the background market realities of public companies. … [T]he output of appraisal proceedings in Delaware can be expected to generate a valuation estimate of dissenters' stock that is particularly credible."); *see also* Jill E. Fisch, *Leave It to Delaware: Why Congress Should Stay Out of Corporate Governance,* 37 DEL. J. CORP. L. 731, 740 (2013) ("[T]he Delaware Court of Chancery is drawn from experts in the corporate law community. Because of these judges' detailed knowledge of business and business law, their decisions are informed, realistic, and highly respected.").

[58] *See, e.g.*, *Dell,* _ A.3d at _ [2017 Del. LEXIS 518, *69] ("When … an appraisal is brought in cases where a robust sale process … in fact occurred, the Court of Chancery should be chary about imposing the hazards that always come when a law-trained judge is forced to make a point estimate of fair value based on widely divergent partisan expert testimony."); In *re Dole Food Co.*, 114 A.3d 541, 555 (Del. Ch. 2014) ("as this court's opinions frequently have observed, the past and current members of this court are 'law-trained judges,' not valuation experts"); *Huff Fund Inv. P'ship v. CKx, Inc.*, 2013 Del. Ch. LEXIS 262, *2 (Del. Ch. Oct. 31, 2013) (in determining the value of real estate, "[a] law-trained judge would have scant grounds to substitute his own appraisal for those of the real-estate valuation experts, and would have no reason to second-guess the market price absent demonstration of self-dealing or a flawed sales process," and valuation of corporate stock arises in the "much more complex venue of the sale of a corporate enterprise."); *Union Ill. 1995 Inv. L.P. v. Union Fin. Group, Ltd.*, 847 A.2d 340, 359 (Del. Ch. 2003) ("For me (as a law-trained judge) to second-guess the price that resulted from that [active sale] process involves an exercise in hubris and, at best, reasoned guess-work.").

[59] *E.g.*, *Dell, Inc. v. Magnetar Global Event Driven Master Fund Ltd.*, _ A. 3d at _ [2017 Del. LEXIS 518, *73-74] ("DCF valuations involve many inputs—all subject to disagreement by well-compensated and highly credentialed experts—and even slight differences in these inputs can produce large valuation gaps."); *Merion Capital LP v. Lender Processing Svcs. Corp.*, 2016 Del. Ch. LEXIS 189, *89 (Del. Ch. Dec. 16, 2016) ("Small changes in the assumptions that drive the DCF analysis, however, generate a range of prices that starts below the merger price and extends far above it.").

case, the court lamented the fact that the parties' experts presented DCF-based valuations differed by a factor of over eight.[60] Many DCF inputs can and often are disputed;[61] judicial error in evaluating such disputes could be resolved by resort to finance principles that are widely accepted but not always applied by courts;[62] but even within the constraints of such principles, there can be plausible variation between optimism and pessimism about the firm's prospects that can cause major divergence among competing experts' DCF valuations.[63]

The use of DCF analysis in appraisal litigation has also been criticized as skewed toward excessive valuations. One commentator suggests that management projections, although widely considered to be the most reliable basis for discounted cash flow analysis,[64] may be

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[60] *ISN Software*, 2016 Del. Ch. LEXIS 125, *2 ("In a competition of experts to see which can generate the greatest judicial skepticism regarding valuation, … this case, so far, takes the prize: one of the Petitioners' experts opines that fair value is greater than eight times that implied by the DCF provided by the Respondent's expert.").

[61] In *ISN*, for instance, the eight-fold difference between the experts' DCF valuations was attributable to disputes over a variety of inputs, including the initial cash flow projection period, anticipated incremental working capital requirements, and the size premium for determining the cost of equity. 2016 Del. Ch. LEXIS 125 at *14-17. *See also Dell, Inc. v. Magnetar Global Event Driven Master Fund Ltd.*, _ A. 3d at _ [2017 Del. LEXIS 518, *74] ("management's projections alone involved more than 1,100 inputs").

[62] Ayotte & Morrison, note [ ] above, at 11 (criticizing bankruptcy courts' occasional acceptance of adjustment of the discount rate on account of firm-specific risk, despite "fundamental corporate finance theory, and recent evidence confirm[ing] that firm-specific risk is not relevant to valuation. Yet experts routinely adjust discount rates (upwards or downwards) to account for firm-specific risks.").

[63] *See, e.g., Peltz v. Hatten*, 279 B.R. 710, 737-38 (D. Del. 2002) ("Simply put, when it comes to valuation issues, reasonable minds can and often do disagree. This is because the output of financial valuation models [is] driven by their inputs, many of which are subjective in nature. … The DCF method involves projections of future cash flows (which are largely dependent on judgments and assumptions about a company's growth rate) and judgments about liquidity and the cost of capital."). Most notably, differences of views about long-term growth (g) will substantially affect the estimation of terminal value, often a very large portion of the total firm value estimate. *See, e.g.*, Richard A. Booth, *The Real Problem with Appraisal Arbitrage*, 72 BUS. LAW. 325, [] (2017). Similarly, experts can plausibly differ with regard to near term estimates of free cash flow, based on competing views of likely operating performance.

[64] *E.g.*, *Verition Partners Master Fund Ltd., et al. v. Aruba Networks, Inc.,* C.A. 11448-VCL, slip op. at 107 (Del. Ch. Feb. 15, 2018) ("As a source of estimated future cash flows, 'Delaware law

systematically overstated due to inherent optimism or a desire on the part of management to demonstrate good performance, especially in anticipation of a potential sale in which their stock (or stock options) would be acquired.[65] Another commentator urges that the courts have mistakenly used a future growth rate (g) that has been systematically excessive, due to the practice of accepting that growth in the terminal period calculation will equal average growth in GDP, without regard to required future reinvestment.[66]

Even in cases involving firms with actively traded shares followed by multiple institutional analysts, where one might expect more neutral valuation incentives than those of litigation experts, valuations may not coalesce within even a relatively narrow range. For just one recent example, nine different firms published target price estimates for Citigroup during the four-day period from July 14-17, 2017 and, despite the absence of any indication that those firms were relying on different information or had any idiosyncratic incentive that would affect the valuation, the resulting estimates ranged from \$61 to \$81 per share, a spread of over 30%.[67]

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clearly prefers valuations based on contemporaneously prepared management projections because management ordinarily has the best first-hand knowledge of a company's operations.'") (*quoting Doft & Co. v. Travelocity.com Inc.,* 2004 WL 1152338, at *5 (Del. Ch. May 20, 2004); *ACP Master, Ltd. v. Clearwire Corp*., 2017 Del. Ch. LEXIS 125, *80 (Del. Ch. July 21, 2017) ("The first key to a reliable DCF analysis is the availability of reliable projections of future expected cash flows, preferably derived from contemporaneous management projections prepared in the ordinary course of business.") (*quoting In re PetSmart, Inc*., 2017 Del. Ch. LEXIS 89, *68 (Del. Ch. May 26, 2017)).

[65] Peter Welsh, *et al.*, *Management Projections in Delaware Appraisal Litigation: Anecdotal Evidence*, 31 INSIGHTS 15 (Oct. 2017) (suggesting systematic management bias to explain shortfalls between actual post-merger performance and pre-merger management estimates).

[66] Booth, 72 BUS. LAW. at 335 (using average GDP to reduce the discount rate is impermissible "unless projected return is reduced to reflect new investment.").

[67] The estimates were:

	Date	Target Price
Barclays	7/17/2017	\$70.00
CFRA	7/14/2017	\$68.00
Credit Suisse	7/16/2017	\$72.00
Deutsche	7/14/2017	\$61.00

In many or perhaps even most litigation situations, experts will not even be constrained by contemporaneous and public DCF analyses. In such situations, the problem of wildly divergent analyses has been persistent and problematic, and a solution has been elusive. At one point there had been a dalliance with the idea that the court could precommit to accept one side's position altogether, thereby encouraging the parties to avoid extreme valuation positions for fear of having the court accept their opponents' contention. In 1997, however, the Delaware Supreme Court rejected that approach as inconsistent with the appraisal statute requiring the court to take into account all relevant factors in determining fair value.[68] At this point, adopting that approach – sometimes described as "final offer arbitration" or the "baseball arbitration" approach – would require a repudiation of that decision, either by the Delaware Supreme Court or by legislative

Evercore ISI	7/17/2017	$ 68.00
JPMorgan	7/17/2017	$72.00
Oppenheimer	7/14/2017	$81.00
Sandler O'Neill	7/17/2017	$76.00
UBS	7/14/2017	$68.00

(reports on file with authors). These estimates largely appear to reflect use of market multiple approaches to valuation, rather than more fully articulated DCF analyses, but we see no reason to expect less variation if firms were to use such DCF analyses more routinely. *Cf.* Ayotte & Morrison, note [ ] above, at 10, indicating that market multiple approaches are likely to result in less variability in valuation results than DCF analysis (in "46% of all cases, the experts fight over the discount rate (WACC) and in 76% they dispute the projected cash flows. By contrast, the key inputs to CCM [comparable company multiples] and TM [transaction multiple] valuations are much less likely to be disputed. Across all cases, none of the key inputs—the selection of comparable companies, the type of multiplier, or the enterprise value of the comparables—was disputed in more than 20% of the cases."); *see also* Jeremiah Green, *et al.*, *Errors and Questionable Judgments in Analysts' DCF Models*, REV. ACCTG. STUD. (forthcoming), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2418478 ("we estimate that in our sample analysts make a median of three theory-related or execution errors and four questionable economic judgments per DCF.").

[68] *Gonsalves v. Straight Arrow Publishers, Inc.*, 701 A.2d 357, 361 (Del. 1997) (where the Chancellor "announced in advance that he intended to choose between absolutes, … the evidentiary construct he established for the subsequent trial created a standard for value determination which is at odds with Section 262's command that the Court 'shall appraise' fair value.").

change. There are no indications that either of those options is being actively explored[69] and, in any event, the evidence is at best equivocal that this approach would actually achieve its intended purpose of bringing the parties' DCF-based valuation contentions closer together. At least one study of final offer arbitration finds that where parties have little to lose by going through the proceedings, and results are inherently uncertain, contentions actually become more extreme and do not converge as hoped.[70] And in an appraisal litigation environment in which petitioners rarely achieve fair value awards significantly less than the deal price, and results are necessarily uncertain, empirical studies do not hold out much assurance that the courts' frustration with divergent valuation contentions would vanish under a final offer arbitration-type process.

Another possible solution to the problem of divergent expert valuation opinions is the use of a court-appointed valuation expert. This idea is by no means new: it has been suggested

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[69] Amici in the *DFC* appeal expressly invited the Delaware Supreme Court to revisit and modify the holdings in *Gonsalves*, but the court did not take up that invitation. Jennifer Arlen et al., Brief of Law and Corporate Finance Professors as Amici Curiae, *DFC Global Corp. v. Muirfield Value Partners, L.P.* (Feb. 3, 2017), *available at* http://lawprofessors.typepad.com/files/dfc-holdings---appraisal.pdf at 23 ("if this Court were to limit or adjust the reasoning of *Gonsalves v. Straight Arrow Publishers, Inc*., the trial judge could employ approaches that incentivize greater moderation among competing experts (such as "baseball arbitration" mechanisms), thereby narrowing the valuation gaps between their analyses.").

[70] James B. Dworkin, *Salary Arbitration in Baseball: An Impartial Assessment After Ten Years*, 14 ARB. J. 63, 69 (March 1986) ("For those parties going to arbitration, the process has not worked well in terms of causing the parties to submit reasonable final offers and final demands. The data indicate that the final positions of the parties are not converging upon one another but rather are spreading farther apart over time. Final-offer arbitrators may in fact be forced to select from between two unreasonable positions, as some critics of this procedure have claimed."). *See also* Henry Farber, *An Analysis of Final Offer Arbitration*, 24 J. CONFL. RES. 680, 699 (1980), *available at* http://journals.sagepub.com/doi/abs/10.1177/002200278002400407 ("final offers tend to diverge where there is more uncertainty," and "using uncertainty to promote negotiated settlements will result in extreme awards where negotiations fail."). On the other hand, Dworkin finds that "[f]inal-offer arbitration in baseball has worked well in terms of enticing the parties to bargain in good faith and settle their differences on their own." 14 ARB. J. at 69; *but see* John L. Fizel, *Play Ball: Baseball Arbitration After 20 Years*, DISP. RES. J. 42, 45 (June 1994) ("The final-offer arbitration system has not reduced the gap between the demands of players and the offers of owners but the system has also not widened the gap, especially not as dramatically as is indicated by the use of average spread.").

multiple times,[71] it was essentially required practice under the appraisal statute before 1976 (when an appraisal case initially was tried to a court-appointed "appraiser"[72]), and it was even tried, at least once, after appraisers were eliminated as a statutory requirement.[73] For a number of possible reasons, however, the use of a court-appointed valuation expert has not caught on. For one thing, use of a court-appointed valuation expert inevitably creates an additional layer of litigation, because both sides understandably will want to have input into the neutral expert's deliberations, thereby creating something of a trial within a trial,[74] much like the abandoned

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[71] *E.g.*, Arlen, *et al*., note [ ] above, at 23 ("nothing in the statute prevents trial judges from engaging independent valuation experts to make a neutral recommendation to the court."). Arlen *et al.* cite *Cede & Co*., 884 A.2d 26 at 34 for the proposition that the "Court of Chancery … appoint[ed] a non-lawyer to serve concurrently as an independent expert witness on valuation matters and as a special appraisal master." Although literally correct, that fact doesn't advance the idea very much: in *Cede*, the Supreme Court rejected that very appointment, finding that the court's "appointment of a combination special appraisal master/independent expert witness and the delegation of responsibility for valuing the Technicolor shares is unlawful because it is contrary to the statutory mandate that "the Court [of Chancery] shall appraise the shares." 758 A.2d at 487; *In re Shell Oil Co*., 607 A.2d 1213, 1222 (Del. 1992) ("if the Court is limited to the biased presentation of the parties, it is often forced to pick and choose from a limited record without the benefit of objective analysis and opinion. To compensate for this handicap, the Court of Chancery should consider, in a proper case, appointing its own expert witness.").

[72] *Gonsalves*, 701 A.2d at 360-361 (describing the requirement of appraisers under Section 262, until the statute was amended in 1976 to eliminate that requirement).

[73] *See* note [] above, describing the rejected appointment in *Cede & Co. v. Technicolor, Inc. See also Hintmann v. Weber,* 1999 Del. Ch. LEXIS 58, *7 (Del. Ch. Mar. 23, 1999) (appointing a special master to resolve "largely technical" issues remaining after issuance of a post-trial opinion on fair value);

[74] *In re Appraisal of Shell Oil Co.,* 607 A.2d 1213, 1223 (Del. 1991) ("The court appointed expert is subject to the same standards which govern other expert witnesses under the Delaware Rules of Evidence. The expert must advise the parties of all findings and submit to depositions. Once trial commences, it is incumbent upon the trial judge to arrange for the court's experts witness to testify if neither party calls him as a witness. The court's expert must be subject to cross-examination by both parties, even if one party chose to call him as its witness. Finally, the court's expert should be reasonably compensated by the parties in such proportion and at such intervals as the trial court determines.").

statutory role of appraiser.[75] In any event, in light of cases like *Gonsalves* and *Technicolor*, it is likely that excessive reliance on an independent valuation expert would constitute a failure to fulfill the court's statutory affirmative requirement that the court "shall appraise" the fair value of the shares at issue.[76] Even though the Delaware Supreme Court has acknowledged that "the Court of Chancery has the inherent authority to appoint neutral expert *witnesses,*"[77] the court's ability to rely on such neutral witnesses is clearly circumscribed by the requirement that the court make its own independent determination of fair value.

c. Increasing Reliance on Deal Price to Measure Fair Value

It is against that backdrop that the most recent judicial valuation trend emerged, in which - with respondents' active encouragement – the courts began to rely more heavily on the merger price to establish fair value in appraisal litigation. As is well known to contemporary readers, that trend culminated in the Delaware Supreme Court's 2017 opinions in *DFC Global Corp. v. Muirfield Value Partners, L.P.*[78] and *Dell, Inc. v. Magnetar Global Event Driven Master Fund Ltd.*[79] In *DFC*, the court concluded that in the case of an arm's length merger arising out of a "robust market search" and free of any "hint of self-interest," "economic principles suggest that the best evidence of fair value was the deal price."[80] In *Dell,* the court further cautioned that "when the evidence of market efficiency, fair play, low barriers to entry, outreach to all logical

[75] *Gonsalves*, 701 A.2d at 361 ("The legislative synopsis for the bill proposing this change [to eliminate the role of appraisers] recites that '[e]xperience has shown this two-step procedure to be wasteful of time and money.' Comm. to H.R. 916, 128th G.A., 2d Sess. (1976) (enacted).").
[76] *Id.*, *citing* Section 262(h); *see also id*. at 360 ("The modern appraisal process presumes a sophisticated judge who exercises independence in determining the value of corporation in a contested proceeding."); *Cede & Co. v. Technicolor, Inc.*, 758 A.2d 485, 496 (Del. 2000) ("reference of an *entire* appraisal proceeding and the use of masters to determine the ultimate valuation are not permitted by the present statutory appraisal scheme.") (emphasis in original).
[77] *In re Appraisal of Shell Oil Co.,* 607 A.2d at 1222-23.
[78] 172 A.3 346 (Del. 2017).
[79] [2017 Del. LEXIS 518,] _ A.3d __ (Del. 2017).
[80] *DFC,* 172 A.3d at 349.

buyers, and the chance for any topping bidder to have the support of [the founder]'s own votes is so compelling, then failure to give the resulting price heavy weight because the trial judge believes there was mispricing missed by all the [company's] stockholders, analysts, and potential buyers abuses even the wide discretion afforded the Court of Chancery in these difficult cases."[81]

We return below to discuss the ramifications of these opinions. They were by no means, however, the first instances in which the Delaware courts relied on deal price to determine fair value. One of the earliest instances of such reliance, in 1993, set the tone for several similar subsequent opinions. In *Cooper v. Pabst Brewing Co.*,[82] Vice Chancellor Hartnett made a number of prescient, insightful observations that resonate in later case law and in this article:

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[81] *Dell*, _ A.3d at _ [2017 Del. LEXIS 518 at *67-68]. The court in *Dell* also reminded students of appraisal law that in appropriate circumstances, the price of a company's stock in an efficient trading market can also "have substantial probative value." _ A.3d at _ [2017 Del. LEXIS 518, *66]. In that case the court concluded that "the evidence suggests that the market for Dell's shares was actually efficient and, therefore, likely a possible proxy for fair value." *Id.* at *4. *See also Aruba Networks*, slip op. at 128 ("For Aruba, the unaffected public market price provides the best evidence of its value as a going concern."). The "evidence" to which the court in *Dell* referred included proof of "a deep public float," active trading ("with more than 5% of Dell's shares [] traded each week"), wide analyst coverage, and "a bid-ask spread of approximately 0.08%." *Id.* at *7. These considerations mirror the factors used by courts to determine whether to apply the fraud on the market presumption in federal securities class action litigation: "(1) the average weekly trading volume expressed as a percentage of total outstanding shares of stock; (2) the number of securities analysts following and reporting on the stock; (3) the extent to which market makers and arbitrageurs trade in the stock; (4) the company's eligibility to file SEC registration Form S–3 (as opposed to Form S–1 or S–2); and (5) the existence of empirical facts showing a causal relationship between unexpected corporate events or financial releases and an immediate price response." Victor E. Schwartz & Christopher E. Appel, *Rebutting the Fraud on the Market Presumption in Securities Fraud Class Actions:* Halliburton II *Opens the Door*, 5 MICH. BUS. & ENTREPRENEURIAL L. REV. 33, 51 (2016), *citing Cammer v. Bloom,* 711 F. Supp. 1264, 1286–87 (D. N.J. 1989), and *Krogman v. Sterritt,* 202 F.R.D. 467, 473, 477–78 (N.D. Tex. 2001) ("considering additional factors that include the company's market capitalization, the bid-ask spread for stock sales, and the stock's trading volume without counting insider-owned stock (i.e. float)"). We have previously identified circumstances, however in which share market prices should *not* be relied upon to measure fair value. *Rationalizing Appraisal Standards*, note [] above, 50 B.C. L. REV. at 1034-37 (cautioning against use of share market prices in connection with mergers involving controlling shareholders or shares that are thinly traded).

[82] 1993 Del. Ch. LEXIS 91, *23-25 (Del.Ch. June 8, 1993).

- First and most important, he recognized that at least where other evidence of fair value is unreliable, use of the deal price could be justified "under conventional principles of economics."[83]
- He further acknowledged that use of the deal price had been regarded as inappropriate because of the possible inclusion of a premium for control.[84]
- Finally, he acknowledged that reliance on the deal price to measure fair value would have the detrimental effect of setting that price as a floor, thereby creating a "no-lose" proposition for appraisal petitioners.[85]

Despite *Pabst*'s general endorsement of deal price as a measure of fair value, that approach in appraisal litigation did not emerge again in appraisal litigation until over a decade later in the *Union Illinois* case, in which Vice Chancellor Strine, author of the Delaware Supreme Court's subsequent opinion in *DFC*, cited *Pabst* as the basis for using deal price as the key point of reference for determining fair value.[86] As he explained, "reliable evidence" of fair value "includes the transaction that gives rise to the right of appraisal, so long as the process leading to the transaction is a reliable indicator of value and merger-specific value is excluded."[87] Notably, the court rejected a DCF approach to valuation, where that alternative approach resulted in a

[83] *Id*. ("the results of the auction for Pabst might be expected to provide a reasonable indication of Pabst's value that this Court can consider in light of the parties' failure to satisfactorily provide a persuasive measure of value using other techniques.").
[84] *Id.* ("Delaware courts in the past, however, have been unwilling to consider just the results of an "auction" between competing tender offerors as evidence of a firm's value because such offers ordinarily contain a control premium unrelated to the value of the firm as a going concern.").
[85] *Id.* ("To allocate a *pro rata* share of a premium to dissenting shareholders would, in effect, make the deal price a "floor" for the appraisal value. By making the deal price a 'floor' for the appraised value, minority shareholders would be presented with a 'no-lose' situation if they seek an appraisal and dissents from mergers would therefore be encouraged.").
[86] *The Union Illinois 1995 Inv. L.P. v. Union Fin. Grp., Ltd.,* 847 A.2d 340, 357 (Del. Ch. 2004).
[87] *Id*.

value below the deal price even net of a 13% discount for synergies.[88] The contrast is striking with contemporaneous appraisal opinions (in *MedPointe* and *eMachines*)[89], in which the court relied on a DCF approach to arrive at fair value in excess of the deal price.

Deal price as a measure of fair value emerged again in a 2007 Chancery opinion, in which the court accorded a weight of 75% to a fair value estimate based on the deal price, less a discount of 13% to account for deal synergies.[90] The court reasoned that "a court may derive fair value in a Delaware appraisal action if the sale of the company in question resulted from an arm's-length bargaining process where no structural impediments existed that might prevent a topping bid."[91] Similar to *Union Illinois*, the court declined to accord weight to a DCF analysis, finding that "industry experts and executives do not consider a DCF a particularly important framework for valuing a company whose primary business is selling life insurance."[92]

Perhaps emboldened by these opinions, the respondent in the *Golden Telecom* appraisal litigation arising out of a merger in 2007 urged Vice Chancellor Strine to rely on the deal price in a case in which the two largest stockholders (together owning over 44% of the stock) had an even larger equity interest in the buyer, and a special committee made no effort to engage in an active market check.[93] Not surprisingly, the Vice Chancellor summarily rejected that contention, finding that "[t]here was no open market check that provides a reliable insight into [the target]'s value."[94]

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[88] *Id.* at 359.
[89] Notes – and – above.
[90] *Highfields Capital, Ltd. v. AXA Fin., Inc.*, 939 A.2d 34, 61 (Del. Ch. 2007).
[91] *Id.*
[92] *Id.* at 54.
[93] *Global GT LP v. Golden Telecom, Inc.*, 993 A.2d 497, 503 (Del. Ch. 2010), *aff'd*, 11 A.3d 214 (Del.2010).
[94] *Id.*, 993 A.2d at 499.

On appeal, however, things took a confusing turn: according to the Supreme Court's opinion, the respondent advanced the robust contention that the court should adopt a standard "requiring conclusive or, in the alternative, presumptive deference to the merger price in an appraisal proceeding."[95] The Supreme Court did not merely reject that contention and affirm the Vice Chancellor's conclusion based on the factual finding that the merger price was an unreliable guide to fair value in the case at hand; rather, the Supreme Court rejected the use of a presumption of reliance on the deal price, "even in the face of a pristine, unchallenged transactional process."[96]

That language – questioning the presumptive use of deal price "even in the face of a pristine, unchallenged transactional process" – of course does not literally preclude using the deal price to determine fair value; it merely rejects any presumption in favor of such use. But that observation seems like semantic formalism: when and why would "a pristine, unchallenged transactional process" *not* permit use of the deal price to determine fair value?[97] And if a process endowed with such adjectives would not justify at least a presumption that the deal price is

[95] *Id.*, 11 A.3d at 216.
[96] *Id.* at 218.
[97] The confusion may stem from imprecision about the nature of judicial presumptions. If deal price were presumptively determinative of fair value, the presumption would require such use of deal price *in the absence of any proof* reflecting on the quality of the sale process. *See* Federal Rules of Evidence Rule 301 ("In a civil case, unless a federal statute or these rules provide otherwise, the party against whom a presumption is directed has the burden of producing evidence to rebut the presumption."). Even if the deal price were presumed *not* to measure fair value, once a respondent produced evidence demonstrating that the sale process was robust and "pristine," any such presumption – which only operates in the absence of proof that establishes a result contrary to the presumed finding – would become irrelevant. *See In re Transkaryotic Therapies, Inc.,* 954 A.2d 346, 349 (Del. Ch. 2008) ("defendants cannot rely on rebuttable presumptions once plaintiffs have rebutted them."); *Staats by Staats v. Lawrence*, 1990 Del. LEXIS 301, *5-6 (Del. 1990) (describing the legal effect of a presumption under Delaware Rules of Evidence Rule 301, and noting that although Rule 301 "specifically rejects the 'bursting bubble' rule which requires only that the opposing party *produce* some evidence to rebut the presumption," and that "once the presumption has been rebutted (whether at the level of production or persuasion), it bursts.").

evidence of fair value, when would the deal price ever be used to measure fair value? In any event, the Supreme Court's language in *Golden Telecom* surely had to be discouraging to any lower court judge asked to rely on deal price to measure fair value. Indeed, when the question arose thereafter in appraisal litigation, the court rejected a request to rely on the deal price to measure fair value, cautioning that cases supporting such reliance had been decided before *Golden Telecom*.[98] And in *Huff Fund Investment Partnership v. CKx, Inc.*,[99] the petitioners went so far as to argue that under *Golden Telecom*, the deal price was "now irrelevant in an appraisal context."[100]

Nevertheless, the chancellors persisted. Beginning in 2013, a series of opinions from the Court of Chancery embraced the deal price as a measure of fair value:

- In the first of those opinions (*CKx*), the court echoed one of the elements of the reasoning twenty years earlier in *Pabst*: namely, that the court could rely on deal price if it concludes that the sale process was reasonable and that other techniques for assessing fair value are "unreliable."[101] Several subsequent cases took the same approach, relying exclusively on the deal price to determine fair value, but suggesting that such reliance was appropriate in part because other valuation approaches were unreliable.[102]

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98 *Merion Capital, L.P. v. 3M Cogent, Inc*., 2013 Del. Ch. LEXIS 172, *16 (Del. Ch. 2013) (rejecting deal price as a measure of fair value in part because respondent "did not attempt to adjust the merger price to remove the 'speculative elements of value that may arise from the 'accomplishment or expectation' of the merger.'").
99 2013 Del. Ch. LEXIS 262 (Del. Ch. Oct. 31, 2013), *aff'd*, 2015 Del. LEXIS 77 (Del. Feb. 12, 2015).
100 *Id.* at *34.
101 *Id*. ("In the absence of comparable companies or transactions to guide a comparable companies analysis or a comparable transactions analysis, and without reliable projections to discount in a DCF analysis, I rely on the merger price as the best and most reliable indication of CKx's value.").
102 *Merlin Partners LP v. AutoInfo, Inc.*, 2015 Del. Ch. LEXIS 128, *42, *52 (Del. Ch. Apr. 30, 2015) (finding that the sale process was "comprehensive" and that, on the other hand, "there is

- Subsequent case law, however, appears to have disposed of any such limitation on restricting use of the deal price to situations in which other valuation techniques are unreliable. In *Appraisal of Ancestry.com*,[103] the court relied exclusively on deal price; the court was satisfied that its DCF analysis was reliable, but relegated that analysis to a corroborative role of confirming that the sale process – which the court found "represent[ed] an auction of the Company that is unlikely to have left significant stockholder value unaccounted for" – provided "comfort that no undetected factor skewed the sales process," reassuring the court in its resolve to rely exclusively on the deal price.[104]
- Similarly, in *Lender Processing*[105] the court relied exclusively on deal price, finding that the company "ran a sale process that generated reliable evidence of fair value," and that even though the court's own DCF analysis came out within 3% of the deal price, the court treated the DCF result as merely corroborative, because even though the projections

no reliable data to input into a DCF or comparable companies model."); *Longpath Capital LLC v. Ramtron Int'l Corp.*, 2015 Del. Ch. LEXIS 177, *2 (finding that "the sales process in this instance was thorough" but that "the management projections that provide the key inputs to the petitioner's DCF analysis are not reliable. The parties agree that there are no comparable companies."); *Merion Capital LP, v. BMC Software, Inc.*, 2015 Del. Ch. LEXIS 268, *49, *64 (Del. Ch. Oct. 21, 2015) (finding that the sale process was "robust," and that management projections were "historically problematic, in a way that could distort value."); *In re Appraisal of PetSmart, Inc.*, 2017 Del. Ch. LEXIS 89, *4 (Del. Ch. May 26, 2017) (finding that the sale process was "reasonably designed and properly implemented," but that the management projections that were the basis for DCF analysis were "fanciful," and there was no "evidence for concluding that some other valuation methodology might lead to a reliable determination of fair value."). The Delaware Supreme Court's recent opinion in *Dell* may also fall into this category: in that case, the noted "the obvious lack of credibility of the petitioners' DCF model—as well as legitimate questions about the reliability of the projections upon which all of the various DCF analyses are based—[as] factors [that] suggest strong reliance upon the deal price and far less weight, if any, on the DCF analyses." *Dell*, _ A.3d at _ [2017 Del. Ch. LEXIS 518, *73].

[103] 2015 Del. Ch. LEXIS 21 (Jan. 30, 2015).

[104] *Id.* at *50.

[105] *Merion Capital LP v. Lender Processing Svcs., Inc.*, 2016 Del. Ch. LEXIS 189 (Del. Ch. Dec. 16, 2015).

on which the DCF analysis was based were "reliable," "[s]mall changes in the assumptions that drive the DCF analysis … generate a range of prices that starts below the merger price and extends far above it."[106]

If there were any continuing thought from this case law development that use of the deal price to determine fair value depended on a showing that all other valuation techniques were demonstrably unreliable, the Delaware Supreme Court's opinion in *DFC* put an end to it. When the court said that "economic principles suggest that the best evidence of fair value was the deal price,"[107] it was well aware of the features of the specific legal context (statutory appraisal) in which those principles would operate, yet it concluded that "those features do nothing to undermine the ability of the Court of Chancery to determine, in its discretion, that the deal price is the *most* reliable evidence of fair value in a certain case … ."[108] It is clear from this statement that as a matter of law, the courts can, in the right circumstances, select deal price to measure fair value, even if one or more other valuation techniques are reasonably reliable, simply because the deal price may be the "most" reliable evidence of fair value.

2. *Critique of Reliance on Deal Price*

a. Academic Commentary

Arriving at that point in the evolution of valuation doctrine was controversial among academics and practitioners. When the *DFC* case was on appeal to the Delaware Supreme Court, two competing camps of scholars submitted opposing amicus briefs – one urging that the deal price should be presumed to constitute fair value,[109] and the other contending that such

[106] *Id.* at *89.
[107] *DFC* 172 A.3d at 349.
[108] *DFC,* 172 A.3d at 367 (emphasis added).
[109] Stephen Bainbridge et al., Brief of Law and Corporate Finance Professors as Amici Curiae in Support of Reversal, *DFC Global Corp. v. Muirfield Value*

presumptive use of the deal price would unduly deter meritorious appraisal claims and harm stockholders.[110]

Although it could be said that the "deal price presumption" camp lost (in the sense that the Supreme Court declined to adopt a presumption in favor of using the deal price), these academic adversaries were not shooting at each other across a bright line, and the differences in their positions were not as stark as might have first appeared. Those advocating a presumption in favor of reliance on the deal price acknowledged that other approaches to determining fair value could be appropriate "where the transaction price bears indications of misinformation or bias," or "where material information is withheld from the market."[111] Conversely, those arguing against the presumptive use of the deal price acknowledged that on appropriate facts the deal price could be used to measure fair value, and that "[t]he Court of Chancery should be permitted to marshal its equitable discretion to decide—on a case-by-case basis—how much weight merger price warrants relative to other factors."[112] The key question, then, is how the courts should exercise that discretion.

b. The Proper Scope and Benefits of Reliance on Deal Price

Whatever the merits of the various academic positions on the use of deal price to measure fair value, the Delaware courts appear to have arrived at a reasonably workable approach to the question. Most obviously, and consistent with the statutory and traditional judicial approach to appraisal litigation, they have rejected the use of any presumption regarding the use of deal

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Partners, L.P. (Jan. 6, 2017), *available at* http://lawprofessors.typepad.com/files/dfc-holdings---bainbridge.pdf.

[110] Jennifer Arlen et al., Brief of Law and Corporate Finance Professors as Amici Curiae, *DFC Global Corp. v. Muirfield Value Partners, L.P.* (Feb. 3, 2017), *available at* http://lawprofessors.typepad.com/files/dfc-holdings---appraisal.pdf.

[111] Bainbridge, *et al.*, note [ ] above, at 16-17.

[112] Arlen, *et al.*, note [ ] above, at 16.

price.[113] Similarly, they have not chosen to look to the deal price to measure fair value in cases in which conflicts of interest on the part of a controlling stockholder or one or more members of the board of directors would lead a court in fiduciary duty litigation to require the proponents of the transaction to establish its entire fairness.[114]

In transactions in which the proponents have no conflict of interest, the Delaware courts do not appear to have developed any formulaic or bright line tool to determine when deal price should measure fair value.[115] What we discern from the case law, however, is a tendency to rely on deal price to measure fair value where the transaction would survive enhanced judicial scrutiny, *i.e.*, when a court would conclude that the transaction's proponents have demonstrated that the process that led to the merger, although perhaps not yielding the optimum outcome for target stockholders, was nonetheless at least reasonable.[116] Thus, in order to determine whether to use the deal price to establish fair value, the Delaware courts are engaging in the same sort of scrutiny they would have applied under *Revlon* if the case were one challenging the merger as in breach of the directors' fiduciary duties. In effect, the courts are applying a presumption *against*

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[113] *DFC*, 172 A.3d at 366; *Golden Telecom*, 11 A.3d at 217-218.
[114] *E.g.*, *Dunmire*, note [] above.
[115] *Lender Processing*, note [] above, 2016 Del. Ch. LEXIS at *33 ("evaluating the reliability and persuasiveness of the deal price for purposes of establishing fair value in an appraisal proceeding is a multifaceted, fact-specific inquiry. The relevant factors can vary from case to case depending on the nature of the company, the overarching market dynamics, and the areas on which the parties focus.").
[116] *See DFC*, 172 A.3d at 370-371 ("the purpose of an appraisal is not to make sure that the petitioners get the highest conceivable value that might have been procured had every domino fallen out of the company's way; rather, it is to make sure that they receive fair compensation for their shares in the sense that it reflects what they deserve to receive based on what would fairly be given to them in an arm's length transaction."); *Dell*, _ A.3d at _ (2017 Del. Ch. LEXIS 518, *62-63 ("The issue in an appraisal is not whether a negotiator has extracted the highest possible bid. Rather, the key inquiry is whether the dissenters got fair value and were not exploited."); *Aruba Networks,* slip op. at 82 (the Delaware Supreme Court's approach in *DFC* and *Dell* "appears to rule out inquiry into whether a different transaction process might have achieved a superior result.").

use of the deal price to measure fair value, because unless the respondent demonstrates that the transaction process was reasonable, the court declines to use that measure of fair value.[117] Indeed, in a very recent opinion, the Court of Chancery coined the term "*Dell* Compliant" to identify what must be shown to establish that it "may consider the deal price as persuasive evidence of statutory fair value."[118]

We discuss below the similarities in the considerations the courts have brought to bear in scrutinizing the deal process, in both appraisal and *Revlon* litigation, and conclude this section with some observations about the utility of the approach we have observed.

i. Appraisal Cases

In addition to confirming the absence of disabling conflicts of interest on the part of transaction proponents, the courts in appraisal litigation have identified a number of factors that incline them toward accepting the deal price as evidence of fair value.[119] "Meaningful competition among multiple bidders during the pre-signing phase" appears to be the most compelling positive factor,[120] and favoring use of the deal price to measure fair value based on

[117] *Dell* establishes, on the other hand, that "[t]here is no requirement that a company prove that the sale process is the *most reliable* evidence of its going concern value in order for the resulting deal price to be granted any weight." *Dell,* 2017 Del. LEXIS 518, *67 (emphasis in original).
[118] *In re Appraisal of AOL, Inc.*, C.A. No. 11204-VCG (Del. Ch., Feb. 23, 2018) slip op. at 20.
[119] *Id.* ("A transaction is *Dell* Compliant where (i) information was sufficiently disseminated to potential bidders, so that (ii) an informed sale could take place, (iii) without undue impediments imposed by the deal structure itself.").
[120] *Lender Processing*, 2016 Del. Ch. LEXIS 189 at *45 ("The first factor supporting the persuasiveness of the Company's sale process is the existence of meaningful competition among multiple bidders during the pre-signing phase."); *BMC*, 2015 WL 6164771, at *14-15 (reciting that the company conducted "a robust, arm's-length sales process" that involved "two auctions over a period of several months," where the company "was able to and did engage multiple potential buyers during these periods," and where the lone remaining bidder "raised its bid multiple times because it believed the auction was still competitive."); *AutoInfo*, 2015 Del. Ch. LEXIS 128, at *34 (noting that the merger price was "the result of competition among many potential acquirers."); *Ramtron*, 2015 Del. Ch. LEXIS 177, at *71 (target "actively solicited every buyer it believed could be interested in a transaction" before signing a merger agreement);

that factor is consistent with the views of even the scholars most skeptical about such use of the deal price.[121] Even before *DFC*, however, and certainly afterward, it is clear that the presence of multiple competing bidders in the pre-signing phase is not a prerequisite to such use. In *DFC* itself, the acquirer was the only bidder, yet the court explained that "the fact that the ultimate buyer was alone at the end provides no basis for suspicion" of the deal price, given other indicia of a reasonable sale process.[122] Earlier opinions also confirm that the deal price can be a reliable measure of fair value even in a single-bidder situation, as long as other circumstances demonstrate that "the process by which [the target was] marketed to potential buyers was thorough, effective, and free from any spectre of self-interest or disloyalty."[123]

Those other circumstances, in addition to the absence of any conflict of interest, include the duration of the sale process[124] and the efforts by the target and its investment banker to

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Ancestry.com, 2015 Del. Ch. LEXIS 21 at *10 ("Ultimately, seven potential bidders submitted non-binding preliminary indications of interest"); *Union Ill.*, 847 A.2d at 359 (finding that the merger "resulted from a competitive and fair auction" in which "several buyers with a profit motive" were able to evaluate the company and "make bids with actual money behind them."); *CKx*, 2013 Del. Ch. LEXIS 262, at *47 (noting that "the bidders were in fact engaged in a process resembling the English ascending-bid auction" involving direct competition between bidders).

[121] Notes [ ] above.

[122] *DFC*, 172 A.3d at 376. It remains to be seen on remand, of course, whether the deal price will be given exclusive weight in determining fair value; but the Supreme Court specifically rejected the Court of Chancery's determination to accord it only one-third weight. *Id.* at [ ] ("we cannot sustain the Chancellor's decision to give only one-third weight to the deal price because the factors he cited in giving it only that weight were not supported by the record.").

[123] *Ramtron*, 2015 Del. Ch. LEXIS 177 at *70-71, *quoting CKx,* 2013 Del. Ch. LEXIS 262 at *42.

[124] *Dell,* _ A.3d at _ [2017 Del. LEXIS 518, *52 ("The go-shop's forty-five-day window afforded potential bidders enough time to decide whether to continue to explore a transaction … ."); *DFC*, 172 A.3d at 376 ("Houlihan had approached every logical buyer," and "no one was willing to bid more [than Lone Star] in the months leading up to the transaction … .").

contact potentially interested purchasers.[125] Other cases using the deal price to measure fair value rely on the adequacy of information about the target available to potential bidders,[126] and public awareness of the existence of the sale process.[127] The courts have also looked to the scope of deal protections during the post-signing period, inclining toward reliance on the deal price as deal protections diminish in potential impact.[128]

It is instructive, on the other hand, to note what circumstances (again, apart from conflict of interest) have led the courts to decline to use deal price to measure fair value. The sample of such cases is small, and recently became even smaller with the reversal of the Court of Chancery's opinion in *Dell*. In that case, "[a] confluence of multiple factors caused [the Court of

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[125] *Ramtron*, 2015 Del. Ch. LEXIS 177 at *76-77 (target's financial advisor "(1) contacted twenty-four third parties . . . ; (2) sent non-disclosure agreements ('NDAs') to twelve . . . ; (3) received executed NDAs from six . . . ; and (4) remained in discussions with three").

[126] *Dell,* _ A.3d at _ [2017 Del. LEXIS 518, *60 ("the likelihood of a winner's curse can be mitigated through a due diligence process where buyers have access to all necessary information")]; Lender *Processing*, 2016 Del. Ch. LEXIS 189 at *52 ("Another factor supporting the effectiveness of the sale process in this case was that adequate and reliable information about the Company was available to all participants, which contributed to the existence of meaningful competition."); *Union Ill.*, 847 A.2d at 350 (the company "was marketed in an effective manner, with an active auction following the provision of full information to an array of logical bidders.").

[127] *See Dell,* _ A.3d at _ [2017 Del. LEXIS 518, *52] ("given leaks that Dell was exploring strategic alternatives, record testimony suggests that Evercore presumed that any interested parties would have approached the Company before the go-shop if serious about pursuing a deal."); *Ramtron*, 2015 Del. Ch. LEXIS 177 at *82 ("This lengthy, publicized process was thorough and gives me confidence that, if Ramtron could have commanded a higher value, it would have.").

[128] *See, e.g.*, *AOL*, slip op. at 20 (absence of "undue impediments imposed by the deal structure itself" is a prerequisite to being "*Dell* Compliant" permitting reliance on the deal price); *Aruba Networks,* slip op. at 86 (reviewing deal protection terms and concluding that "[t]his combination of defensive provisions would not have supported a claim for breach of fiduciary duty."); *Dell,* _ A.3d at _ [2017 Del. LEXIS 518, *52-53] ("submitting a non-binding indication of interest that qualified as a Superior Proposal' [] would lower the termination fee from $450 million to $180 million thanks to 'Excluded Party' status and give that party months to scrutinize the Company's finances and growth prospects."); *In re Topps Co. S'holders Litig.*, 926 A.2d 58, 86 (Del. Ch. 2007) ("the deal protections the Topps board agreed to in the Merger Agreement seem to have left reasonable room for an effective post-signing market check. For 40 days, the Topps board could shop like Paris Hilton.")

Chancery] not to give greater weight to the deal price, including (i) the transaction was an MBO, (ii) the bidders used an LBO pricing model to determine the original merger consideration, (iii) there was compelling evidence of a significant valuation gap driven by the market's short-term focus, and (iv) the transaction was not subjected to meaningful pre-signing competition."[129] The court concluded that "there were structural impediments to a topping bid on the facts of the case, particularly in light of the size and complexity of the company and the sell-side involvement of the company's founder."[130]

In a fashion that was at least in part predictable in light of its opinion in *DFC,* however, the Delaware Supreme Court rejected each of these considerations as a basis for disregarding the deal price. First, use of an LBO pricing model based on demanded internal rates of return is no longer a legally viable reason to disregard the deal price in determining fair value. As the court explained in *DFC*, and reiterated in *Dell,* "[t]hat a buyer focuses on hitting its internal rate of return has no rational connection to whether the price it pays as a result of a competitive process is a fair one."[131]

The "valuation gap driven by the market's short-term focus" likewise did not survive *DFC* as a reason not to rely on the deal price. In *DFC*, the Court of Chancery had reduced the significance attached to deal price in part because "DFC was in a trough with future performance dependent upon the outcome of regulatory actions … ."[132] To this, the Supreme Court responded that (1) share markets take regulatory risk into account, (2) share trading prices have not lost relevance to fair value, and (3) buyers consider regulatory risk; simply because the company's

[129] *Lender Processing*, *86 (summarizing the court's previous decision in *Dell*).
[130] *Id*. at *87.
[131] *DFC*, 172 A.3d at 375. The Supreme Court reiterated that conclusion in *Dell.* _ A.3d _ at _ [2017 Del. LEXIS 518, *50].
[132] 2016 Del. Ch. LEXIS 103, at *67-68.

"growth story was not accepted by the markets does not mean that the markets ignored it."[133] And in *Dell*, the court similarly and emphatically rejected the suggested "valuation gap" as a reason to reject deal price as a measure of fair value.[134]

The court in *Dell* also rejected several of the Court of Chancery's other justifications for declining to give weight to the deal price in determining fair value. It did so, however, because of what it found to have been a lack of factual support; the implication, therefore, is that if properly documented, those justifications could have supported the lower court's decision not to give weight to the deal price. For example:

- The court concluded that the company's founder and largest stockholder, Michael Dell, "only had approximately 15% of the equity," and had "pledged his voting power would go to any higher bidder, voting in proportion to other shares."[135] Had Mr. Dell's holdings been larger, or had he not pledged to vote for a higher bid in proportion to other shares, perhaps the court would have viewed the effect of his involvement as an impairment of the sale process and, thus, a reason not to give weight to the deal price.
- Similarly, the court rejected the lower court's conclusion that "'Mr. Dell's value to the Company' imposed another impediment to the likelihood of rival bidders succeeding and thus dissuaded them from even trying."[136] The court found that this conclusion was factually unsupported, based on evidence that other bidders did not "'regard Mr. Dell as essential to their bids,'" and based also on the lack of evidence that he would not

[133] *DFC*, 172 A.3d at 375.
[134] *Dell,* _ A.3d at _ [2017 Del. LEXIS 518, *46] ("The record before us provides no rational, factual basis for such a 'valuation gap'" where the market in Dell stock was proven to be efficient, for the reasons described in note [] above).
[135] *Id.* at _ [*55].
[136] *Id.* at _ [*63].

continue to serve the company if another bidder had prevailed.[137] Had the evidence shown, however, that Mr. Dell's participation with other bidders was essential yet unavailable, the court might well have concluded that the result of the sale process could not be relied upon to measure fair value.[138]

- Finally, the court concluded that the "winner's curse" theory – that bidders "resist outbidding incumbent management for fear they might later discover the information that management from bidding even higher in the first place"[139] – "might deter rival bids in some MBOs,"[140] but was rebutted in the Dell situation by (i) the fact that two financial sponsors submitted competing bids during the go-shop period, and (ii) the lower court's finding that "all of the bidders received access to the data they requested."[141]

What the *Dell* litigation ultimately highlighted was a central legal issue bearing on the relationship between fiduciary duty doctrine and the willingness of the courts to use deal price in appraisal proceedings. In no uncertain terms, the Court of Chancery in *Dell* emphasized that judged by enhanced scrutiny standards in fiduciary duty litigation, the merger would "sail through."[142] Yet the court at the same time decided not to give any weight to the merger price,

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[137] *Id.* at _ [*64].
[138] In *AOL*, the Court of Chancery employed similar considerations in declining to accept the deal price as a measure of fair value. The court noted that during the post-signing period the company "was constrained by a *no-shop* provision, combined with: (i) the declared intent of the acting CEO to consummate a deal with Verizon [the buyer], (ii) the CEO's prospect of post-merger employment with Verizon, (iii) unlimited three-day matching rights, and (iv) the fact that Verizon already had ninety days between expressing interest in acquiring the entire company and signing the Merger Agreement, including seventy-one days of data room access." *Id.*, slip op. at 22-23. "Cumulatively," the court concluded, "these factors make for a considerable risk of informational and structural disadvantages dissuading any prospective bidder." *Id.*
[139] *Id.* at _ [*60].
[140] *Id.* at _ [*62].
[141] *Id.* at _ [*61].
[142] *Dell*, 2016 Del. Ch. LEXIS 81, *88.

"[b]ecause it is impossible to quantify the exact degree of the sale process mispricing."[143] Hence the key issue: if a merger satisfies even enhanced judicial scrutiny, can the deal price be irrelevant in determining fair value? Is the appraisal remedy thus somehow unmoored from the question of the reasonableness of fiduciary conduct in approving the merger?

DFC strongly suggested that the answer to these questions is no, and the Supreme Court's opinion in *Dell* eliminated any doubt about that suggestion. According to *DFC*, "the purpose of an appraisal … is to make sure that [dissenting stockholders] receive fair compensation for their shares in the sense that if reflects what they deserve to receive based on what would fairly be given to them in an arm's-length transaction."[144] And what is "fairly given," according to the court, is not some abstract, idealized concept of some inherent or intrinsic value;[145] rather, fair value is what "a reasonable seller, under all the circumstances, would regard as within a range of fair value; one that such a seller could reasonably accept."[146] In *Dell,* the Supreme Court confirmed the link between a finding of appropriate fiduciary

[143] *Id.*, *168.
[144] *DFC*, 172 A.3d at 371 .
[145] *See Global GT LP v. Golden Telecom, Inc.,* 993 A.2d 497, 517 n. 126 (Del. Ch. 2010), *aff'd*, 11 A.3d 214 ("the hoary term "intrinsic value," [is] best reserved for judgments of the divine than ones made by human judges.").
[146] *DFC*, 172 A.3d at 370, *quoting Cinerama, Inc. v. Technicolor, Inc.*, 663 A.2d 1134, 1143 (Del. Ch. 1994), *aff'd*, 663 A.2d 1156 (Del. 1995). We share this rejection of the notion that stockholders are entitled to some inherent or intrinsic value, or that such a value even exists. This view marks our principal, if not only, quarrel with the premises of the most articulate opponents of the "market price rule." *See* Albert Choi & Eric Talley, *Appraising the "Merger Price" Appraisal Rule*, [citation to current draft] at 5 (positing that appraised value can be "too high, too low, or just right *by objective criteria*.") (emphasis added). We do not quarrel, however, with the suggestion that a legal definition of fair value that created a relatively high reserve price would have the effect of increasing observed merger premia. We do not venture an opinion as to whether such high premia would have a net positive wealth effect, taking into account the interests of acquirers and their investors, or whether such higher premia would reflect a legally imposed wealth transfer from acquirers to target stockholders. *See also* Callahan, *et al.*, note [ ] above, at 5 ("if the anticipated appraisal right grows "too large," it can be detrimental to target shareholder welfare (akin to imposing an unrealistic reserve price on an auction).").

conduct and reliability of the deal price to measure fair value: reciting the lower court's finding that the deal "easily would sail through if reviewed under enhanced scrutiny," the court identified that finding as one that would "suggest the deal price deserves weight."[147]

In any event, the range of reasonableness concept of fair value advanced in *DFC* is strongly evocative of enhanced judicial scrutiny under *Revlon* and its progeny,[148] so it seems reasonable as a matter of doctrinal interpretation to conclude that the standard under *Revlon* for validating a merger involving a sale of control is equivalent to the standard under the appraisal statute for determining whether to use the deal price to measure fair value.

Subramanian argues for a somewhat stricter standard, including a presumption that the deal price measures fair value "in a true arms-length deal with meaningful price discovery.[149] We suppose that his advocacy of any sort of presumption does not survive doctrinally after *DFC*, but we do not fault him for that advocacy. His centrist approach to the so-called "market price rule" issue is the closest to our own view, and if we part company with him, it is on the question of whether deal price can measure fair value where the sale process involved only a post-signing

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[147] *Dell,* _ A.3d at _ [2016 Del. LEXIS, *56]; *see also Aruba Networks,* slip op. at 86-87 (noting that "would not have supported a claim for breach of fiduciary duty," and concluding that "there is good reason to think that the deal price exceeded fair value and, if anything, should establish a ceiling for fair value.").

[148] *E.g.*, *C&J Energy Servs. v. City of Miami Gen. Employees' & Sanitation Employees' Ret. Trust*, 107 A.3d 1049, 1067 (Del. 2014) ("a court applying *Revlon*'s enhanced scrutiny must decide "whether the directors made a *reasonable* decision, not a *perfect* decision.") (emphasis in original).

[149] Guhan Subramanian, *Using the Deal Price for Determining "Fair Value" in Appraisal Proceedings*, at 23 (Feb. 6, 2017 draft), *available at* http://www.hbs.edu/faculty/Publication%20Files/20170206_Subramanian-draft_9aa5b475-ed61-4fae-8b39-9b2de9d09425_78008941-390f-458a-a0e0-92863f300dc8.pdf, forthcoming in THE CORPORATE CONTRACT IN CHANGING TIMES: IS THE LAW KEEPING UP? (U. Chicago Press) ("in a true arms-length deal with meaningful price discovery, there should be a strong presumption that the deal price represents fair value in an appraisal proceeding; but if the deal process does not include a meaningful market canvass and an arms-length process, deal price should receive no weight.").

market check (via a go-shop provision) subject to a continuing match right. His position is that "an exclusive pre-signing negotiation followed by a go-shop process in which the buyer gets an unlimited match right would probably not qualify for deference to the deal price."[150] The use of the word "probably" makes it unclear how stringently this position should be applied, but we would reject, as the courts have done under *Revlon*, any position that the sale process is necessarily defective, such that the deal price should not be relied upon to measure fair value, in the event it entails an exclusive pre-signing negotiation followed by a go-shop process in which the buyer gets an unlimited match right.[151]

In any event, because we maintain that the *Revlon* line of case law can and should inform how the courts evaluate when to rely on the deal price in determining fair value, we find it helpful to review briefly how the courts applying *Revlon* have determined whether a merger survives enhanced judicial scrutiny.[152]

ii. *Revlon* Cases

That line of case law demonstrates that the Delaware courts have on occasion found that a sale process run by even a disinterested board of directors may fail to survive the enhanced judicial scrutiny required by *Revlon*. For example, in *In re Netsmart Techs., Inc. S'holders*

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[150] *Id.* at 22.
[151] *Cf. In re Topps Co. S'holder Litig.*, 926 A.2d 58, 87 (Del. Ch. 2007) (concluding that where a merger agreement provided for a 40-day go-shop, a bifurcated termination fee and matching rights, "this approach to value maximization was likely a reasonable one," even in the absence of a pre-signing market check); *see also AOL*, slip op. at 21 ("if front-end information sharing is truncated or limited, the post-agreement period should be correspondingly robust, so to ensure that information is sufficiently disseminated that an informed sale can take place and bids can be received without disabling impediments.").
[152] We do not mean to suggest that the courts should not take into account the reliability of DCF analysis when deciding whether to rely on the deal price to determine fair value. To the contrary, particularly in a case in which the reasonableness of the sale process is closely contestable, the inclination to rely on deal price may vary inversely with the court's confidence in the reliability of DCF analysis. *See* text at notes [-] above.

Litig.,[153] the court preliminarily enjoined an acquisition by two private equity firms, finding that the board's efforts to identify potential strategic bidders was inadequate[154] and that for a micro-cap company a post-signing market check should not be deemed as reliable as in the case of a widely followed, large-cap company.[155] The court therefore concluded that "the board's failure to engage in any logical efforts to examine the universe of possible strategic buyers and to identify a select group for targeted sales overtures was unreasonable and a breach of their *Revlon* duties."[156] Similar findings in an appraisal case should presumably lead the court to decline to accept the deal price as a proxy for fair value.

In a case decided the same year as *NetSmart*, the court found that the directors' conduct in a different phase of the deal process failed to meet *Revlon*'s enhanced scrutiny standard. In *In re Topps Co. S'holder Litig.*,[157] the court focused on the board's refusal to release a competitor (Upper Deck) from a standstill agreement in order to permit it to proceed with an offer for the target during a 40-day go-shop period. The court emphasized the importance of such a period where there had been no pre-signing market check, and concluded that the board's "decision to foreclose its stockholders from receiving an offer from Upper Deck seems likely, after trial, to be found a breach of fiduciary duty" under *Revlon*.[158] Had the case involved a statutory appraisal, it

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[153] 924 A.2d 171 (Del. Ch. 2007).
[154] *Id*. at 196 ("What was never done by … the board was a serious sifting of the strategic market to develop a core list of larger healthcare IT players for whom an acquisition of Netsmart might make sense.").
[155] *Id*. at 197 ("Precisely because of the various problems Netsmart's management identified as making it difficult for it to attract market attention as a micro-cap public company, an inert, implicit post-signing market check does not, on this record, suffice as a reliable way to survey interest by strategic players. Rather, to test the market for strategic buyers in a reliable fashion, one would expect a material effort at salesmanship to occur.").
[156] *Id*. at 199.
[157] 926 A.2d 58 (Del. Ch. 2007).
[158] *Id*. at 92.

seems likely that the court, for similar reasons, would have declined to use the deal price to measure fair value.

By contrast, a transaction can satisfy *Revlon*'s enhanced scrutiny even in the absence of a pre-signing market check and multiple bidders at any stage. In *Pennaco, Inc. Shareholders' Litig.*,[159] the court rejected *Revlon* claims where the board had negotiated exclusively with one bidder before entering into a merger agreement with that bidder, and no other bidder emerged. What was critical to the court's acceptance of the sale process as reasonable was that the "board was careful to balance its single buyer negotiation strategy by ensuring that an effective post-agreement market check would occur."[160] And what made the post-agreement market check effective was that "no substantial barriers to the emergence of a higher bid existed."[161] In these circumstances, the fact that no other bidder emerged, despite the fact that the transaction was well publicized and the company was widely followed, was taken by the court as ""evidence that the directors, in fact, obtained the highest and best transaction reasonably available."[162] If a court in an appraisal proceeding were to reach the same conclusion, it seems almost certain, at least

[159] 787 A.2d 691 (Del. Ch. 2001).
[160] *Id.* at 707.
[161] *Id*. ("The merger agreement's provisions leave [the acquirer] exposed to competition from rival bidders, with only the modest and reasonable advantages of a 3% termination fee and matching rights."). *Cf. Koehler v. NetSpend Holdings, Inc*., 2013 Del. Ch. LEXIS 131, *45 (Del. Ch. May 21, 2013) ("in forgoing a pre-Agreement market check, and relying on an ambiguous fairness opinion, the Board had to be particularly scrupulous in ensuring a process to adequately inform itself that it had achieved the best price," yet "deal-protection devices which included a no-shop clause and which provided that don't-ask-don't-waive provisions already in place would continue, prevent[ed] the Board from learning whether [two private equity buyers] were interested in bidding.").
[162] *Id.*, *quoting Matador Capital Mgmt. Corp. v. BRC Holdings,* 729 A.2d 280, 293 (Del. Ch. 1998).

after *DFC* and *Dell*, that the court would look to the deal price as a significant or even exclusive factor in determining fair value.[163]

Nevertheless, *Revlon*'s enhanced scrutiny leaves plenty of room to address a scenario that has caused some justifiable concern on the part of critics of use of the deal price to measure fair value: specifically, a circumstance in which the compensation arrangements or other interests of the CEO or perhaps other senior managers as well create incentives on their part to negotiate and approve a deal and forgo the real possibility of alternative transactions that would provide greater value for stockholders generally.[164] One can always quarrel about the extent to which the courts can effectively police the effect of such misaligned incentives,[165] but existing doctrine certainly permits an inquiry into such incentives and their effects,[166] and there is no motion to dismiss pleading stage obstacle to such an inquiry in appraisal cases.

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[163] *See Dell*, _ A.3d at _ [2017 Del. LEXIS 518, *54] (the trial court's "assessment that more bidders—both strategic and financial—should have been involved assumes there was some party interested in proceeding. Nothing in the record indicates that was the case. Fair value entails at minimum a price some buyer is willing to pay—not a price at which no class of buyers in the market would pay.").

[164] *See, e.g.*, Matthew Schoenfeld, *The High Cost of Fewer Appraisal Claims in 2017: Premia Down, Agency Costs Up*, working paper (Aug. 27, 2017), at 4, *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3028381 (CEOs willingness to accept suboptimal deals for stockholders "stems not only from CEOs' ability to internalize 100% of their CIC package while externalizing most 'costs' of a lower transaction price, but also from any additional rents they are able to extract—via transaction-related bonuses or ex-post Parachute augmentations—at the expense of disinterested shareholders.").

[165] Schoenfeld plainly maintains that the current litigation system fails to do an adequate job: "Amid the recent enfeeblement of germane shareholder litigation, it is perhaps not surprising then that as premiums have fallen, Parachutes and related bonuses have burgeoned.") *Id.*

[166] For example, plaintiffs in *Pennaco* argued that the golden parachutes of the senior officers motivated them and the board to accept a poor deal. Although the court rejected the argument on the facts – the two senior officers were also very large stockholders who were unlikely to have sacrificed substantial value for the stock just in order to activate their severance payments – the court was at least open to entertaining this argument against reliance on the deal price. 787 A.2d at 708-710. In contrast, in *El Paso S'holders Litig.*, 41 A.3d 432, 443 (Del. Ch. 2012), the court found a likely breach of fiduciary duties under *Revlon* in part because of the CEO's personal interest in acquiring a business from the company's merger partner. As the court explained:

iii. The Continuing Utility of Appraisal (and Appraisal Arbitrage)

By suggesting that the inquiry whether to use the deal price to measure fair value should be as demanding (or undemanding) as enhanced scrutiny under *Revlon*, we are not contending for any sort of "market price rule" or presumption in favor of using the deal price to measure fair value; to the contrary, we argue in favor of the opposite presumption, under which respondents in appraisal cases who argue in favor of such use of the deal price will be required, as with any valuation contention in appraisal cases, to come forward with evidence sufficient to establish the reasonableness of the sale process.[167] As a result, there is no reason to think that the test of whether to use the deal price in appraisal cases will be any less demanding than the application of the enhanced scrutiny standard in *Revlon* preliminary injunction cases.

In fact, with post-closing damages claims under *Revlon* having been substantially circumscribed by the impact of stockholder approval of mergers after *Corwin*,[168] it may be the

"when there is a reason to conclude that debatable tactical decisions were motivated not by a principled evaluation of the risks and benefits to the company's stockholders, but by a fiduciary's consideration of his own financial or other personal self-interests, then the core animating principle of *Revlon* is implicated. As *Revlon* itself made clear, the potential sale of a corporation has enormous implications for corporate managers and advisors, and a range of human motivations, including but by no means limited to greed, can inspire fiduciaries and their advisors to be less than faithful to their contextual duty to pursue the best value for the company's stockholders." *Id.* at 439. *See also Smith v. Van Gorkom*, 488 A.2d 858, 866 (Del. 1985) (finding directors personally liable for breach of fiduciary duty in approving a merger largely negotiated by a CEO whose retirement was imminent and who opposed a potentially better LBO deal in which younger members of management might take his place).

[167] *Montgomery Cellular Holding Co. v. Dobler*, 880 A.2d 206, 221 (Del. 2005) ("In a statutory appraisal proceeding, each side has the burden of proving its respective valuation positions by a preponderance of the evidence."); *M.G. Bancorporation v. Le Beau*, 737 A.2d 513, 520 (Del. 1999) ("In a statutory appraisal proceeding, both sides have the burden of proving their respective valuation positions by a preponderance of evidence.").

[168] *Corwin v. KKR Fin. Holdings, LLC*, 125 A.3d 304, 312-313 (Del. 2015) ("[W]hen a transaction is not subject to the entire fairness standard, the long-standing policy of our law has been to avoid the uncertainties and costs of judicial second-guessing when the disinterested

appraisal remedy, rather than the class action for breach of fiduciary duty, that will supply the primary private litigation check on the conduct of the sale process.[169] We see this possibility as a salutary one, for two principal reasons. First, as Subramanian notes,[170] bidders who face the risk of post-closing appraisal litigation will have an incentive – so long as the appraisal remedy remains viable – not to impose demands upon target boards that would increase the prospect that the court would decline to find the sale process to have been reasonable, and thereby increase the risk of an appraisal award substantially greater than the deal price.[171] Second, we concur with the assessment of Korsmo and Myers that appraisal litigation (especially where driven by appraisal arbitrage) is structurally superior to class action litigation in the sense that there is less concern that the litigation will be driven by counsel, and a greater likelihood that the litigation will be initiated and resolved based on the interests of clients with substantial investments in the shares at issue.[172]

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stockholders have had the free and informed chance to decide on the economic merits of a transaction for themselves.").

[169] *See* Korsmo & Myers, note [ ] above, 92 WASH. U. L. REV. at 1599 ("If … a merger is agreed to at a price far enough below fair value—measured in conventional financial terms—appraisal arbitrageurs will have an incentive to accumulate a position and seek appraisal. In so doing, the arbitrageur will serve as a check on low-ball merger agreements and freeze-outs.").

[170] Subramanian, note [] above, at 19 (buy side principals and their advisers "could encourage the sell-side board to have a good deal process (pre-signing auction, no matching rights, etc.) in order to reduce their post-closing appraisal risk."). Subramanian also points out, however, that such encouragement might be limited because it could (and would presumably be intended, in effect) to drive up the acquisition price. Still, fostering an incentive to bidders to avoid excessive demands for bidding advantage and deal protections would be a useful countervailing effect of an appraisal rule that required examination of the quality of the sale process.

[171] *Dell,* _ A.3d at _ [2017 Del. LEXIS 518, *73] ("If the reward for adopting many mechanisms designed to minimize conflict and ensure stockholders obtain the highest possible value is to risk the court adding a premium to the deal price based on a DCF analysis, then the incentives to adopt best practices will be greatly reduced.").

[172] Charles R. Korsmo & Minor Myers, 92 WASH. U. L. REV. at 1555 (appraisal "litigation [is] controlled, by the actual plaintiff—the appraisal arbitrageur—rather than the plaintiffs' attorney. … In addition, the narrow focus of an appraisal claim and the possibility a court will determine

It is not our view, however, that appraisal arbitrage, coupled with rejection of the deal price where conflicts of interest or other deficiencies in the sale process render the deal price unreliable as a measure of fair value, will necessarily result in the most completely balanced check on opportunism. We say this because unmitigated reliance on unadjusted deal price creates a no-lose rule, presciently warned against a quarter century ago in *Pabst*:[173] with a statutory presumption of an award of fully compensatory pre-judgment interest,[174] appraisal arbitrageurs would suffer little or no down side and could afford to be undiscriminating in targeting deals tainted by conflict of interest or process failures. As a result, that system would elicit over-litigation of appraisal cases because, in our view, an unadjusted deal price frequently overstates fair value. Why? Because, as the Delaware courts have repeatedly held, the deal price may (and often does) include synergistic value to which the target's stockholders, as such, have no legal or economic claim of entitlement. In the section that follows, we therefore address how the determination of fair value should take account of synergistic merger gains in order to arrive at an appropriate balance of risk in appraisal litigation.[175]

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fair value to be below the merger price render the risks and costs of litigation far more symmetric than in other forms of shareholder suit, further reducing the potential for nuisance claims.").

173 Note [] above.

174 DEL. CODE ANN. tit. 8, § 262(h) ("Unless the Court in its discretion determines otherwise for good cause shown, interest from the effective date of the merger through the date of payment of the judgment shall be compounded quarterly and shall accrue at 5% over the Federal Reserve discount rate . . . ."). We concur with Korsmo and Myers, however, that the statutory presumptive interest rate is unlikely in itself to generate additional appraisal litigation. *Id.* at 1555, 1580-1581 ("Given the risks an appraisal petitioner must assume—an extended period of illiquidity with an unsecured claim against a surviving company that may be highly leveraged, plus the risk of the legal claim itself—the idea that interest rates are driving sophisticated parties to target appraisal is implausible."). Of course, compensatory pre-judgment interest eliminates an artificial disincentive to pursue litigation.

175 Because we believe that appropriately deducting synergistic value from the deal price will achieve an appropriate balance of risk, we do not support the more aggressive step of establishing a privately ordered cost-shifting regime, which - if elected - would require appraisal arbitrageurs to pay the defendant corporation's legal fees and costs in the event that such

IV. THE IMPACT OF SYNERGIES ON FAIR VALUE

A. Case Law

Among the clearest propositions in Delaware appraisal case law is that if deal price is to be used to determine fair value, it must be adjusted to eliminate the portion of that price attributable to synergistic merger gains. That legal proposition has been stated as follows:

> *Cavalier Oil* and its progeny seem to require the court to exclude "any value that the selling company's shareholders would receive because a buyer intends to operate the subject company, not as a stand-alone concern, but as part of a larger enterprise, from which synergistic gains can be extracted."[176]

That proposition has been invoked frequently in the case law,[177] and appears to be "inspired by a desire to honor the statute [Section 262]'s command that the court 'determine the fair value of

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defendant carries the burden of proof in demonstrating the fairness of the merger price. Jay B. Kesten, *The Uncertain Case for Appraisal Arbitrage*, 52 WAKE FOREST L. REV. 89, 134-136 (2017) ("the possibility of fee shifting should serve as a meaningful deterrent against unmeritorious and low-probability claims, and improve acquirers' settlement leverage if they honestly believe the merger price was fair.").

[176] *DFC,* 172 A.3d at 368, *quoting Union Illinois 1995 Inv. Ltd. P'ship v. Union Fin. Grp., Ltd.,* 847 A.2d 340, 356 (Del. Ch. 2004), *citing Cavalier Oil* , 564 A.2d 1137, 1144 (Del. 1989).

[177] *Dell, Inc. v. Magnetar Global Event Driven Master Fund Ltd.,* A.3d at__[2017 Del. LEXIS 518, *39], *citing Global GT LP v. Golden Telecom, Inc.*, 993 A.2d 497, 507 (Del. Ch. 2010), *aff'd,* 11 A.3d 214 (Del. 2010) ("the court should exclude 'any synergies or other value expected from the merger giving rise to the appraisal proceeding itself.'"); *Aruba Networks,* slip op. at 53 (same); *ACP Master, Ltd. et al. v. Sprint Corp., et al.*, 2017 Del. Ch. LEXIS 125, *79 (Del. Ch. July 21, 2017) ("the appraisal statute requires that the Court exclude any synergies present in the deal price, that is, value arising solely from the deal."); *In re Appraisal of SWS Group Inc.*, 2017 Del. Ch. LEXIS 90, *29 (Del. Ch. May 30, 2017) ("When the merger price represents a transfer to the sellers of value arising solely from a merger, these additions to deal price are properly removed from the calculation of fair value."); *Dunmire v. Farmers & Merchs. Bancorp of W. Pa.*, 2016 Del. Ch. LEXIS 167, *28 (Del. Ch. Nov. 10, 2016) ("the Court's task in a Section 262 appraisal action is to determine the going concern value of the enterprise as of the merger date exclusive of any element of value—such as the value of achieving expected synergies—from the accomplishment of the merger."); *Longpath Capital, LLC v. Ramtron Int'l Corp.*, 2015 Del. Ch. LEXIS 177, *83 (Del. Ch. June 30 2015) ("in an appraisal action, it is inappropriate to include merger-specific value"); *Highfields Capital, Ltd. v. AXA Fin., Inc.*, 939 A.2d 34, 72 (Del. Ch. 2007) ("The court must … exclude synergistic elements from the sale price to arrive at a fair

the shares exclusive of any element of value arising from the accomplishment or expectation of the merger.'"[178]

There is remarkably little clarity or consistency in the case law, however, about how to apply this proposition. The courts' treatment of precisely what synergistic value to exclude in specific cases has been erratic, no doubt because of inconsistencies in the quality of proof, rather than any inability on the part of the courts to assess the evidence. Key examples, however, include:

- *Union Illinois*: In this relatively early case, the court observed that the finance literature "does not contain a reliable method for estimating the portion of a merger premium that results from expected synergy value."[179] Nevertheless, the court approved "a reasonable synergy discount of 13%," because potential bidders were large banks that expected synergistic gains, and the target's banker's "DCF model, which it used in giving its fairness opinion, had mid-range synergy assumptions of 15%-20% for the synergy value that would be shared with [target] as a seller."[180]
- *AXA*: The court approved a discount of $4.12 per share, 13% less than the deal price of $31 per share, based on accepting a corrected "sum of the parts" evaluation of the target

value."); *Montgomery Cellular Holding Co. v. Dobler*, 880 A.2d 206, 220 (Del.Ch. 2005) ("In performing its valuation, the Court of Chancery is free to consider the price actually derived from the sale of the company being valued, but only after the synergistic elements of value are excluded from that price."); *M.P.M. Enterprises, Inc. v. Gilbert*, 731 A.2d 790, 796 (Del. 1999) (valuation approach "was undoubtedly proscribed by § 262(h)" "because it focused on the elements of value that would arise from the merger, rather than on the going concern value of MPM without any consideration of such synergistic values.").

[178] *DFC*, 172 A.3d at 368, *citing* Section 262(h).

[179] *Id*. n. 35, *citing* John C. Coates IV, *"Fair Value" as an Avoidable Rule of Corporate Law: Minority Discounts in Conflict Transactions,* 147 U. PA. L. REV. 1251, 1351-52 (1999).

[180] *Union Illinois,* at n. 26.

of $26.88 per share.[181] The court declined to accept a synergies estimate based on a discounted cash flow analysis that the expert in question found unreliable as a basis for evaluation of the firm itself.[182]

- *Ramtron*: The court accepted a synergy discount of $0.03 per share (less than 1%) from the merger price of $3.10 per share.[183] The court's calculation of that estimate was more opaque than the derivation of the approximately 11% estimate that the court rejected, an estimate which was based on two distinct approaches: (i) estimating the ratio of premiums paid by strategic and financial buyers generally, on the theory that the difference between the two is attributable to synergies, and (ii) inferring total synergies of $0.69 per share from a comparison of target stand-alone projections with the buyer's projections, and assuming that 50% of those synergies would be shared with the target's stockholders.[184] The court rejected the first approach because it "does not tell me anything about *this specific* transaction, which must be the focus in a Section 262 action."[185] It rejected the second approach because it "focuses solely on cost savings, which are positive synergies, and neglects the possibility of negative synergies."[186] The petitioner's expert's 1% estimate of synergy ostensibly took into account testimony about

[181] *Highfields*, 939 A.2d at 61. The court placed a 75% weight on the result (deal price minus estimated synergies).
[182] *Id.* The court had found that "industry experts and executives do not consider a DCF a particularly important framework for valuing a company whose primary business is selling life insurance." *Id.* at 54.
[183] *Ramtron*, 2015 Del. Ch. LEXIS 177 at *85-86.
[184] *Id.*
[185] *Id.* at *85 (emphasis in original).
[186] *Id.* at *86.

negative synergies, so the court found that it "better conforms to the evidence adduced at trial than Ramtron's position."[187]

B. Defining Synergies in a Fair Value Determination

Given the clear position that synergy value shared with the target's stockholders by inclusion in the purchase price must be deducted from the price where the deal price is used to determine fair value, Delaware law could benefit from a similarly clear articulation of what constitutes synergy for purposes of this calculation, and how that calculation should be made.[188] We begin with the first of these two topics.

The task of defining synergy is superficially simple: as expressed in a recent Delaware appraisal case, it is "value arising solely from the deal."[189] As previously noted, this definition proceeds from and tracks the appraisal statute's exclusion of "any element of value arising from

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[187] *Id.*

[188] We thus focus on the definition of synergies from a legal perspective. From a financial perspective, synergies come in a variety of categories. *See, e.g.*, Anna Loukianova, *et al.*, *Valuing Synergies in Strategic Mergers and Acquisitions Using the Real Options Approach*, 14 INV. MGMT. & FIN. INNOV. 236, 236 (2017) ("Operating synergies involve the improvement of companies' operating activities. They can be achieved, because, since the combined firm is bigger than any of the companies before the M&A deal, it can exert economies of scale, exercise greater pricing power and provide new opportunities for growth in new or existing markets. Financial synergies come from the fact that the merged firm can bring better debt capacity, as well as the tax benefits resulting from operating losses from the target firm, asset revaluations, etc."); Taher Hamza, *et al.*, *How Do Takeovers Create Synergies? Evidence from France,* 11 Studies in Business & Economics 54, 55 (2016), *available at* http://eccsf.ulbsibiu.ro/RePEc/blg/journl/11105hamza&sghaier&thiraya.pdf ("Higher operating synergies are synonymous with revenue increase, cost savings, investment cutbacks and greater market power. Indeed, enhanced efficiency with regard to productive assets improves the operating cash flows, leading to heightening of the firm's value. As for financial synergies, they encompass tax savings and decreased bankruptcy risk through diversification of the merged entity, which generates lower weighted average cost of capital.").

[189] *ACP Master, Ltd. et al. v. Sprint Corp., et al.*, 2017 Del. Ch. LEXIS 125, *79 (Del. Ch. July 21, 2017).

the accomplishment or expectation of the merger."[190] Despite this superficial simplicity, however, determining whether an element of value arises "from" the merger can be deceptively complex.

To illustrate this, consider the famous case of *Smith v. Van Gorkom*.[191] In that case, the operative reality of the target company (TransUnion) included the fact that despite strong cash flows, accelerated depreciation prevented it from generating sufficient taxable income to use its investment tax credits.[192] The value of those tax credits might have been exploited in two ways: the first way (the one that actually occurred) was a sale of the company to an acquirer able to apply the tax credits to its income from other sources; the second way, which TransUnion considered, was to acquire additional income-generating businesses.[193] Let us assume (although the record is not completely clear on the point) that the $55 per share merger price included some amount attributable to the value the acquirer expected to realize through use of TransUnion's investment tax credits. Should that amount be deducted from the deal price in measuring fair value, because it was value arising from the accomplishment or expectation of the merger?

In a literal sense the answer is clear: of course it should be deducted, because it was the merger that enabled the acquirer to extract (and pay target stockholders for) the value of the tax credits. Suppose, however, that TransUnion was also in a position to extract that value on its own, through a program of asset acquisitions.[194] In that circumstance, would it still be appropriate to make the deduction?

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[190] *DFC*, 172 A.3d at 368, *citing* Section 262(h).
[191] 488 A.2d 858 (Del. 1985).
[192] *Id.* at 864-865.
[193] *Id.* at 865.
[194] This assumption may be counterfactual: according to the recollection of counsel for the acquirer, TransUnion "had a lot of tax law carry forwards. They didn't have enough operating income to take full advantage of them, and that in a sort of perverse way was causing a burden

In previous writings we have claimed that the answer is no: the potential to extract value from the tax credits should be viewed as having been an opportunity belonging to Trans Union, and even if that value was ultimately achieved through the mechanism of the merger, that value should be treated as belonging to TransUnion and thus a component of its fair value for appraisal purposes.[195] In that case, in our view, it would be improper to reduce the fair value determination by the putative synergy component of the deal price, because to do so would deprive target stockholders of an element of value of the going concern (namely the target's own opportunity to extract value from the tax credits).

A hypothetical further illustrates this point. Consider the case of a target firm owning a set of patents that would be valuable to a company with capital and marketing clout sufficient to exploit the patents. Assume further, however, that the target firm lacks both of these attributes, and that a merger with a well-heeled acquirer enables the combined firm to generate substantial value from the patents. Again, should a portion of that value, if shared with target stockholders, be deducted from the deal price to arrive at a fair value for their stock? And again, our answer is no, or at least not necessarily, even though it could be said that the value arose from the accomplishment or expectation of the merger. Why? Because we have not excluded the possibility that the target could, on its own, have realized such value (or at least a substantial part of it) through an agreement to license the patents. In that circumstance, the potential additions to

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on their stock. So they couldn't buy companies fast enough and manage them to take care of that problem."). Transcript of interview with A. Gilchrist Sparks III, Jan. 24, 2017, at 21, *available at* https://www.law.upenn.edu/live/files/6758-sparks-vangorkom-interview-transcript.

[195] Hamermesh & Wachter, *Cornfields*, note [] above, 31 J. CORP. L. at 164-165 (proposing use of the corporate opportunity doctrine to define when potential future cash flows belong to the corporation, and should therefore be considered to contribute to the fair value of the corporation's shares).

cash flow, while in fact brought about by the merger, could just as well be considered to have belonged to the target firm.[196]

Our point is that in evaluating a deduction for synergies, courts and litigants should be careful to distinguish between gains that arise *solely* from the merger – solely, in the sense that the gains would not have come about but for the occurrence of the merger – and gains that would likely have been achieved by the company on a standalone basis. This distinction still leaves plenty of room to identify synergies that really do arise solely from the merger. Although cost reductions (staff reductions, for a typical example) may in some circumstances be achievable by the going concern on a standalone basis, they would surely arise solely from the merger if they could not realistically be achieved by the target on that basis, and depend for their existence on scale that would not exist but for the merger.

Defining the appropriate scope of deductible synergies implicates one further and probably controversial question relating to the value of control. The key example is the leveraged buyout led by a private equity firm. In that situation, as we have written previously, "the aggregation of the shares is value-creating because a controller can then exercise the control rights involving directing the strategy and managing the firm."[197] Should that incremental value be treated as part of the operative reality of the going concern, or as a value arising only from the accomplishment of the merger (and therefore not part of fair value in appraisal litigation)?

[196] An even clearer case for treating gains ostensibly connected to a merger as belonging to the acquired firm is where the merger is accomplished by a controlling stockholder which, before the merger occurs, had begun to implement the improvements that follow the merger. *See* Coates, note [] above, 147 U. PA. L. REV.at 1350-1351, describing *Weinberger v. UOP* and *Cede & Co. v. Technicolor, Inc.* ("the synergies included in fair value determinations in those two cases were limited to synergies that both were 'known' as of the date of the merger and were related to steps that had previously been taken by the controlling shareholder, so that the synergies were plausibly 'part of' the company being valued.").

[197] *Rationalizing Appraisal Standards*, 50 B.C.L. REV. at 1052.

Decisions from the Court of Chancery would suggest that such incremental value should be viewed as part of the value of the going concern.[198] We have taken the contrary position, however, because "the value is created by the aggregation process and does not exist independent of it, [so] the logical and normatively compelling conclusion is that the value creation should accrue to the party that has created it."[199] Applying that reasoning to our example, the private equity purchaser, by consolidating ownership and control through the purchase of disaggregated shares, creates additional value that could not be generated by the firm as constituted (with agency costs arising due to disaggregation of control), and that additional value must be excluded from the determination of fair value.[200]

C. Estimating the Size and Allocation of Synergies

Having arrived at an appropriate, if necessarily imprecise, definition of synergy for purposes of the legal context of determining fair value in an appraisal proceeding, the remaining – and not insubstantial – task is to articulate an appropriate approach for courts and litigants to take in estimating the total amount of synergies expected to arise from a merger, and identifying the portion of that amount incorporated in the deal price and thereby shared by the buyer with the

[198] *Id.*, *citing Andaloro v. PFPC Worldwide, Inc.*, 2005 Del. Ch. LEXIS 125, *70 (Del. Ch. Aug. 19, 2005); *Borruso v. Communc'ns Telsys. Int'l*, 753 A.2d 451, 458-59 n. 10 (Del. Ch. 1999); *LeBeau v. M.G. Bancorp, Inc.*, 1998 Del. Ch. LEXIS 9, *39 (Del. Ch. Jan. 29, 1998); *but see* [next footnote].

[199] *Id.* The recent opinion in *Aruba Networks* embraces this view. *Id.*, slip op. at 126-127 ("When an acquirer purchases a widely traded firm, the premium that an acquirer is willing to pay for the entire firm anticipates incremental value *both* from synergies *and* from the reduced agency costs that result from unitary (or controlling) ownership. Like synergies, the value created by reduced agency costs results from the transaction and is not part of the going concern value of the firm.") (emphasis in original).

[200] We develop this point more fully in *Rationalizing Appraisal Standards*, at 1047-1054. Again, we recognize that the view of Delaware courts may be at odds with our own. *See, e.g.*, *In re Ancestry.com, Inc.*, 2015 Del. Ch. LEXIS 21 at *50 (suggesting that in an acquisition by a non-strategic purchaser, synergies are unlikely: "as is typical in a non-strategic acquisition, I find no synergies that are likely to have pushed the purchase price above fair value."); *but see Aruba Networks*, slip op. at 126-127.

target's stockholders. At the outset of this discussion, we acknowledge that there is remarkably little scholarship, in law, finance or economics, on this precise subject.[201] Accordingly, what we have pieced together below from that limited scholarship and from informal presentations by several investment bankers[202] is a suggestion of how appraisal litigants and the courts might approach the issue of synergies.

The matters of estimating overall synergies and evaluating how they are allocated as between the buyer and target stockholders are two quite distinct determinations, and we therefore address them separately.

1. *Estimating Total Synergies*

It has been suggested that total synergies arising from an acquisition can be estimated using the following three-step calculation:

1. "[V]alue the firms involved in the merger independently, by discounting expected cash flows to each firm at the weighted average cost of capital for that firm.

2. "[E]stimate the value of the combined firm, with no synergy, by adding the values obtained for each firm in the first step.

3. "[B]uild in the effects of synergy into expected growth rates and cash flows and … revalue the combined firm with synergy. The difference between the value of the combined firm

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[201] *See, e.g.*, Raffaele Fiorentino & Stefano Garzella, *The Synergy Valuation Models: Towards the Real Value of Mergers and Acquisitions*, 124 INT'L RES. J. OF FIN. & ECON. 71, 72 (2014), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2195551 ("theoretical and empirical research still lacks a common understanding of the effectiveness of synergy valuation models in M&A.").

[202] In particular, we acknowledge with gratitude insights from James DelFavero (Goldman Sachs), Erik Gilje (Wharton School), and Jonathan Mir (Lazard), although they are not to be blamed for any errors or inaccuracies in our interpretation of their very helpful suggestions.

with synergy and the value of the combined firm without synergy provides a value for synergy."[203]

We believe that this approach makes perfect sense from a theoretical standpoint. We suggest, however, that applied to real world litigation to determine fair value, it is both unrealistic and unnecessary. It is unrealistic because it would require valuing the expected free cash flows of not one but three distinct firms, thereby defeating the principal benefit of being able to rely on a fixed deal price instead of wildly disparate competing discounted cash flow valuations. This would compound the problems inherent in calculating future values that we have discussed above. In the normal appraisal, there is the calculation of the value of the target firm. Experts can have optimistic or pessimistic stories to tell about the target's firm future value. In the three-step approach, there are three stories, with different valuation estimates hanging on whether the expert is optimistic or pessimistic about the future of the target firm, the acquiring firm, and the combined firm with synergies.

In the context of statutory appraisal litigation the three-step approach is not only unrealistic, it is unnecessary as well, because once the first component of the exercise is completed, and a DCF value for the target firm as an independent entity has been established, there is no occasion (if the analysis is reliable) to continue with the remainder of the exercise. Since the target firm is being valued without regard to the effects of the merger, the synergies arising from the merger do not need to be estimated and deducted from the value of the firm to arrive at fair value.

A second approach to estimating synergistic merger gains involves an assessment of the response of acquirer and target stock (or stock option) prices to announcement of the merger

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[203] Aswath Damodaran, *The Value of Synergy*, at 6-7 (Oct. 2005), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=841486 (emphasis in original).

terms.[204] We pass over the details of that approach, however, because it is likely to be available in real world appraisal litigation only rarely. The approach requires that the stock of both acquirer and target be publicly traded. Market-based information should be used whenever it is available, but in the typical appraisal case, in which the stock of either the target or the buyer, or both, is not publicly traded, there is insufficient market-based information to use this technique to estimate synergies. Among the forty or so appraisal cases in the last fifteen years that generated a valuation opinion, only eleven involved both a publicly traded target and a publicly traded buyer. And in the eight of those nine cases that did not involve a freezeout by a controlling stockholder[205] or a significant conflict of interest on the part of two major stockholders,[206] the stockholders seeking appraisal fared remarkably badly: the median increment of the fair value determination over the deal price was negative 4-8%; the average increment was negative 19.4%; the best outcome was a positive increment of 3%; and the worst outcome was a negative increment of 85%.[207] With such results, it seems most unlikely that

[204] Kathryn Barraclough, *et al.*, *Using Option Prices to Infer Overpayments and Synergies in M&A Transactions*, 26 REV. FIN. STUD. 695 (2013); Michael Bradley, Anand Desai & E. Han Kim, *Synergistic Gains from Corporate Acquisitions and their Division Between the Stockholders of Target and Acquiring Firms*, 21 J. OF FIN. ECON. 3(1988).
[205] *See* Appendix (Prescott Group v. Coleman Co. and AT&T Mobility). The Appendix to this article lists Delaware appraisal cases since 1997, and recites for each such case the deal price, the fair value established by the court, and the percentage difference between those two figures, as well as whether the underlying transaction was an "interested transaction" as defined in Model Business Corporation Act § 13.01. In recent cases, the fair value judgment of the Court of Chancery specified in the Appendix may not be final (*i.e.*, may be subject to appeal or revision on remand).
[206] *See* Appendix (Global GT v. Global Telecom). That case involved a clear conflict of interest on the part of the two largest stockholders of the target company (owning over 44% of the stock), which also held large blocks (greater in percentage terms and absolute value) of the bidder's stock. *Global GT LP v. Golden Telecom, Inc*., 993 A.2d 497, 503 (Del. Ch. 2010), *aff'd*, *Golden Telecom, Inc. v. Global GT, LP,* 11 A.3d 214 (Del. 2010).
[207] *See* Appendix: Merion v. 3M Cogent (+3%); Longpath v. Ramtron (-1%); AOL (-3%); Andaloro v. PFPC (-4%); SWS (-8%); AXA Financial (-22%), Aruba Networks (-35%) and Clearwire (-85%).

appraisal arbitrage or other active use of the appraisal remedy will occur in cases of public company acquisitions of other public companies, except in cases of freezeouts by a controlling stockholder or other transactions that involve conflicted major stockholders. Given that likely infrequency, it is doubtful at best that the courts will have much occasion to adopt an approach dependent on trading prices of publicly held target and bidder stock.

A third approach, and the one we advocate, calls for a direct assessment of the value of synergies and is not dependent on public trading of either the target's or the bidder's stock. Specifically, we suggest an approach in which each element of synergy is framed in terms of periodic incremental improvements to future free cash flow, and the resulting stream of anticipated incremental cash flows is reduced to present value.[208] An illustration of our approach may be helpful. Assume that Target (T) and Buyer (B) have accounting staffs of 25 and 75 persons, respectively, but that after their merger the combined firm will employ an accounting staff of only 90 persons. Assume further that the aggregate annual compensation of the 10 accounting staff members who will no longer be employed is $1 million. Assume further, finally, that T and B had anticipated that, but for the merger, those 10 persons would have been

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[208] *See* Jens Kengelbach, Dennis Utzerath, & Cristoph Kaserer, *How Successful M&A Deals Split the Synergies*, BOSTON CONSULTING GROUP (Mar. 27, 2013), *available at* https://www.bcgperspectives.com/content/articles/mergers_acquisitions_postmerger_integration_divide_conquer_deals_split_synergies/?chapter=2 ("Because synergies tend to mount over time and become fully effective after roughly two years (assuming skillful management by the acquirer), the value of synergies can be stated as the present value of ongoing synergies after two years."); Kristen Ficery, *et al.*, *The Synergy Enigma*, *available at* https://www.criticaleye.com/insights-servfile.cfm?id=47 ("Synergies are the present value of the net, additional cash flow that is generated by a combination of two companies that could not have been generated by either company on its own."); Fiorentino & Garzella, note [ ] above, 124 INT'L RES. J. OF FIN. & ECON. at 73 (describing the "net present value model" in which "the synergy value is the present value of the expected synergy flows from the deal process, discounted back at a rate that reflects the riskiness of these flows."). According to survey results gathered by Fiorentino & Garzella, this model is, by a wide margin, the most frequently used. *Id.* at 77.

employed going forward indefinitely. With these assumptions, and putting aside tax considerations, one can define the synergy achieved by the merger as a stream of future free cash flows of $1 million per year in perpetuity. Applying an appropriate discount rate applicable to the combined firm[209] (say 10% for illustrative purposes) yields a present value of $10 million. In an actual case, the analysis would surely be more complex. The full benefit of synergies may not be achieved immediately: in our example, it may take one or two years to achieve the contemplated staff reduction. Similarly, the expected synergy may be offset by related costs (sometimes described as negative synergies): in our example, again, there may be severance payments required to achieve the contemplated staff reductions, and those payments would have to be deducted from the anticipated cash flow enhancements.

This approach can also be applied to synergies involving revenue enhancements rather than cost reductions.[210] The analysis would simply examine what revenue enhancements are expected, year by year, and would discount the resulting future cash flows to a present value to arrive at the synergy contribution of the revenue enhancement under examination. We suspect, however, that synergistic revenue enhancements will ordinarily be harder to predict than cost synergies and, therefore, less likely than cost synergies to contribute to a discount from deal price to arrive at fair value.[211]

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[209] Note that because it is the combined firm that generates the future cash flows under consideration, it is that firm's cost of capital, and not the cost of capital of the target firm, that should be applied in estimating the present values of synergistic gains.

[210] Ficery, *et al.*, *The Synergy Enigma,* note [] above (one should "define and identify revenue synergies as the positive present value of the net cash flows that result from revenue increases.").

[211] Kengelbach, *et al.* ("Revenue synergies, on the other hand, are more difficult both to realize and to quantify, depending as they do on the behavior of third parties such as customers. Although concepts such as cross-selling, up-selling, and concentrating on the highest-margin products and segments are conceptually easy to grasp, realizing them calls for exceptional management and execution. As a result, analysts and investors tend to view revenue synergies with great skepticism, preferring to believe in them only after they have come to fruition.

The synergy-specific discounted cash flow approach that we suggest also makes perfect theoretical sense. There are two reasons, however, why one could nevertheless question whether this alternative approach represents any practical improvement over a full discounted cash flow valuation of the subject/target firm. First, it is unclear whether or to what extent acquirers actually engage in the exercise of preparing estimates of synergistic gains in a fashion that might be useful to a synergy-specific discounted cash flow analysis. Many acquirers take the occasion, upon announcement of a deal, to publicize estimates of gross synergies, but those announcements are largely devoid of any period by period breakdowns of anticipated savings and related costs.[212]

We nevertheless suspect that acquirers could, in litigation, present such breakdowns – after all, the public disclosures of gross synergistic gains are presumably premised on more granular estimates of such gains. With renewed attention on the part of the Delaware courts to the issue of a deduction for synergies, the parties are now incentivized to prepare this information and present it in litigation. Indeed, we predict that such attention and incentives may generate an outpouring of evidence bearing on synergy estimates. The treatment of synergies in finance literature, largely neglected today, may become a prime target of finance-based research.

Acquirers, by the same token, tend to downplay talk of revenue synergies during deal negotiations to avoid the risk that the seller will demand a share of synergies that ultimately may not materialize."); Ficery, *et al.*, *The Synergy Enigma*, note [] above ("Revenue synergies are especially controversial, because they are often difficult to calculate and capture, and are also often overvalued.").

[212] *See, e.g.*, "AT&T to Acquire Time Warner," AT&T Press Release (Oct. 22, 2016), *available at* http://about.att.com/story/att_to_acquire_time_warner.html ("AT&T expects $1 billion in annual run rate cost synergies within 3 years of the deal closing. The expected cost synergies are primarily driven by corporate and procurement expenditures. In addition, over time, AT&T expects to achieve incremental revenue opportunities that neither company could obtain on a standalone basis."); Qualcomm press release, "Qualcomm to Acquire NXP," (Oct. 27, 2016), *available at* https://www.qualcomm.com/news/releases/2016/10/27/qualcomm-acquire-nxp ("Qualcomm expects to generate $500 million of annualized run-rate cost synergies within two years after the transaction closes.").

We note that appraisal litigants only started using sophisticated DCF-based analyses after *Weinberger* required that the best techniques of finance be used to support appraisal awards.[213] Similarly, the use of fairness opinions from investment bankers became a typical part of deal documents only after *Smith v. Van Gorkom* implied that such documents might be useful for directors in fulfilling their fiduciary duties.[214]

A second reason for questioning the synergy-specific DCF analysis we advocate, however, is that it uses many of the same highly contestable inputs (*e.g.,* beta, equity risk premium) that are employed in a target firm-only discounted cash flow valuation. Our response is simply that in evaluating anticipated synergistic gains, as opposed to whole-firm cash flows, one is likely to be applying the contestable inputs to a much smaller amount of future cash flows than the cash flows associated with the target firm as a whole. As a result, the same variability of inputs should have a smaller cumulative effect on valuation contentions, where only the value of synergies is contested. The small effect is only a partial consolation, especially since the optimism or pessimism of the competing expert stories may make the percentage effect even larger, particularly if and when the serious subtraction of synergies enters case law.

2. *Estimating the Allocation of Synergies to the Target*

Even if the total present value of synergies expected to arise from the merger could be estimated with great confidence, it could not necessarily be deducted in full from the deal price to arrive at the fair value of the target firm; to do so inflexibly would in effect assume that none of that synergy value is retained by the acquiring firm. Thus, for example, if the acquiring firm anticipated $10 million in anticipated synergies and shared $4 million of that value with target

[213] 457 A.2d at 713.
[214] Lawrence A. Hamermesh & Jacob J. Fedechko, *The Role of Judicial Opinions in Shaping M&A Practice*, in RESEARCH HANDBOOK ON MERGERS AND ACQUISITIONS (Edward Elgar 2016), at [ ].

stockholders by including that amount in the deal price, that $4 million should be deducted from the deal price in arriving at fair value. The question in any given appraisal proceeding, then, is to determine the extent to which estimated synergies were allocated in the deal to target stockholders and how much of that value was retained by the acquirer.

To say that the answer to this question is less than scientifically precise would be a considerable understatement. To the best of our knowledge, the percentage allocation in any given deal is not expressly articulated in the merger agreement or even in merger negotiations.[215] The relatively sparse literature on this question, moreover, is inconsistent. Some advance the view that synergistic merger gains almost exclusively benefit target shareholders, and acquiring firms retain none of those gains.[216] According to another study, which relied on post-deal announcement call option price movements rather than stock price movements, acquirers and target shareholders share such gains about equally.[217] A more recent and detailed study reports that the median percentage of synergy value received by target shareholders is 31%, although the allocation varies by industry, with target shareholders in the telecommunications industry

[215] The court in *Aruba Networks* acknowledged this measurement problem: "The parties agree that it is not possible to determine with precision what portion of the final deal price reflects synergy value. The respondent's expert conceded that '[t]he percentage of synergies actually paid by HP to Aruba cannot be accurately measured.'"). *Id.,* slip op. at 102.
[216] S.B. Moeller, F.P. Schlingemann & R.M. Stultz, *Wealth Destruction on a Massive Scale? A Study of Acquiring Firm Returns in the Recent Merger Wave*, 60 J. FIN. 757 (2004) (estimating that acquiring firm stockholders lose 12 cents per acquisition dollar spent, indicating that on average any merger synergy value (and more) is allocated to target stockholders); Michael Bradley, Anand Desai & E. Han Kim, *Synergistic Gains from Corporate Acquisitions and their Division Between the Stockholders of Target and Acquiring Firms*, 21 J. OF FIN. ECON. 3, 31 (1988) ("target stockholders have captured the lion's share of the [synergistic] gains from tender offers, and their share of these gains has increased since the passage of the Williams Amendment of 1968.").
[217] Kathryn Barraclough, *et al.*, *Using Option Prices to Infer Overpayments and Synergies in M&A Transactions*, 26 The Review of Financial Studies [] (2013).

receiving 6% of synergy value and target shareholders in the health care industry receiving 51% of synergy value.[218]

Other commentators indicate that the allocation of synergy gains in mergers may be determined by factors in addition to industry type. For example, it has been suggested, plausibly, that such gains are likely to be more fully shared with target stockholders as the number of bidders and intensity of bidding competition increase.[219] It has also been suggested that the target's shareholders will receive a greater share of synergistic merger gains if the target firm's contribution to those synergies is greater.[220] In our analysis, however, a finding that a target firm is entirely or largely responsible for the creation of a synergistic gain may well also lead to the conclusion that the gain was an opportunity belonging to the target and, thus, part of its going concern value.[221] That conclusion in turn would dictate that in using deal price to determine fair value, no deduction should be made on account of that gain.

3. *Judicial Evaluation of Synergy Claims*

As reviewed above, judicial evaluation of synergy claims is in its infancy, and pertinent authorities and financial expertise have yet to develop fully. One can imagine a more mature

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[218] Jens Kengelbach, Dennis Utzerath, & Cristoph Kaserer, *How Successful M&A Deals Split the Synergies*, BOSTON CONSULTING GROUP (Mar. 27, 2013), *available at* https://www.bcgperspectives.com/content/articles/mergers_acquisitions_postmerger_integration_divide_conquer_deals_split_synergies/#chapter1. This study is as detailed in its conclusions as it is lacking in transparency: the report does not reveal its methodology, and the data base is described only as "636 deals with transaction values of over $300 from 2000 to 2011," without specification of industry or jurisdiction.

[219] Bradley, *et al.*, at 31; Kengelbach, *et al.* ("The amount of the seller's share does not correlate with M&A cycles—that is, it doesn't rise during M&A-intensive periods and decline during lulls in the cycle. It varies instead according to factors such as the relative negotiating strengths of the buyer and seller and the amount of competition to acquire the target.").

[221] *See* part III.B above, addressing how to identify synergies that are appropriately considered in arriving at a deduction from deal price to determine fair value.

system for such evaluation, however, applying principles already developed in appraisal litigation:

- Just as expert testimony on discounted cash flow analysis has been widely presented and accepted as a tool for valuation of firms in appraisal litigation, one can expect that synergy valuation will be an appropriate subject for expert testimony, at least where the proffered valuation techniques are reasonably familiar to the financial community.[222]
- Just as cash flow projections are more readily accepted where they are prepared by management in the ordinary course of business, and not strictly for purposes of litigation,[223] synergy projections are likely to be more persuasive where they are generated as part of a merger integration planning process, where there is at least some incentive for presenting estimates that are sustainable, rather than purely for litigation purposes. Unmoored from the operational integration planning process, synergy estimates may be subject to upward bias on account of an interest on the part of the acquirer in persuading the market (including its own investors) that the acquisition is beneficial.[224]

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222 *Weinberger v. UOP, Inc.*, 457 A.2d 701, 713 (Del. 1983) (endorsing the use of "generally accepted [valuation] techniques used in the financial community and the courts"). Referring to the context of appraisal in connection with controller freeze-outs, Coates expressed a similar hope that financial and litigation practice would develop techniques for assessing synergies. Coates, note [ ] above, 147 U. PA. L. REV. at 1352 ("Practitioners would develop and refine techniques for arriving at appropriate adjustments, and a body of case law would develop to assist practitioners in this process.").

223 *See, e.g.*, *ACP Master, Ltd. v. Clearwire Corp.*, 2017 WL 3105858, at *31 (Del. Ch. July 21, 2017) ("The first key to a reliable DCF analysis is the availability of reliable projections of future expected cash flows, preferably derived from contemporaneous management projections prepared in the ordinary course of business.") (quoting *In re PetSmart, Inc.*, 2017 WL 2303599, at *32 (Del. Ch. May 26, 2017)).

224 *See* Peter Welsh, *et al.*, *Management Projections in Delaware Appraisal Litigation: Anecdotal Evidence*, note [] above, at 17 ("Existing literature suggests that management's financial forecasts often exhibit upward biases.", *citing* David S. Koo & P. Eric Yeung, *Managers' Forecasts of Long-Term Growth in Earnings: New Information or Cheap Talk?* at 3 (Working Paper) *available at*

- Because it would be the acquirer (as or through the surviving corporation) that would be urging a deduction from deal price to account for synergies, and because it is the acquirer that should be expected to have, or have access to, evidence of the extent and allocation of such synergies, any significant weakness in the evidence should, to the extent of such weakness, result in a refusal by the court to give effect to the requested discount from deal price.[225] Put another way, where acquirers are aware of the potential for appraisal litigation in which the target's share of synergies is to be deducted from the deal price in measuring fair value, a failure on their part to generate reasonably supported specific synergy estimates in the course of merger planning should counsel against accepting claims for a deduction from deal price based on estimates of synergies generated solely for purposes of litigation.
- As suggested in one recent case, the court's choice of estimate of how synergies were shared may be guided by its judgment about the quality of the bargaining by the target's

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http://www.stern.nyu.edu/sites/default/files/assets/documents/Eric%20Yeung.pdf, and Christopher S. Armstrong, et. al., *Biases in multi-year management financial forecasts: Evidence from private venture-backed U.S. companies*, 12 REV. OF ACCOUNTING STUDIES 183 (2007)).

[225] *E.g., Smith v. Van Gorkom,* 488 A.2d 858, 878 (Del. 1985) ("the production of weak evidence when strong is, or should have been, available can lead only to the conclusion that the strong would have been adverse."); *Interstate Circuit, Inc. v. United States*, 306 U.S. 208, 226 (1939) ("The production of weak evidence when strong is available can lead only to the conclusion that the strong would have been adverse."). Where a controller stockholder is relying on evidence from comparable transactions and contending for a deduction from deal prices based on synergies, burdens of proof associated with the entire fairness doctrine provide a further basis for rejecting such deductions where the evidence for such deductions is weak or non-existent. *See Montgomery Cellular Holding Co. v. Dobler,* 880 A.2d 206, 221-222 (Del. Ch. 2005) ("Given the paucity of synergy-related evidence for which [the controlling stockholder] was responsible, the Vice Chancellor coped admirably with the evidence that was presented, and reached a reasonable valuation using the analytical tools and evidence that were available to him."). *See also* Coates, note [] above, 147 U. PA. L. REV. at 1352 (asserting that "traditional Delaware law in entire fairness litigation that places the burden of proving entire fairness on the transaction sponsors … would permit control persons, at a minimum, to exclude the impact of synergy value if they could propose a reliable estimate of such synergies.").

representatives: a perception that bargaining was relatively weak may imply that the target's stockholders received a relatively smaller share of overall synergies, and vice versa.[226]

- Finally, the courts would likely be assisted in their evaluation of synergies by continued use of discounted cash flow valuation of the standalone target firm. In theory, that valuation should yield a result equal to the difference between the deal price and the value of synergies shared with target stockholders. Accordingly, where the latter formula is used to determine fair value (where the deal process is adequate), DCF analysis may be a check on the plausibility of contentions about the extent of synergies being deducted from the deal price, and the efficacy of the deal process.[227]

IV. CONCLUSION

In the wake of judicial decisions emphasizing reliance on the deal price to determine fair value, it remains to be seen whether appraisal arbitrage will continue to be as rewarding and as common a practice as it has been in recent years. But we see no reason why the legal validity of the practice will or should be eliminated, and we believe that it should remain as a mechanism to make the appraisal remedy viable where the remedy can serve as a check on self-serving opportunism or even a disinterested failure to conduct a reasonable sale process.

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[226] *Aruba Networks,* slip op. at 104-105 ("Because I am inclined to think that Aruba's representatives bargained less effectively than they might have, I tend to think that they obtained a relatively low share of the synergies from HP.").

[227] In several instances the courts have found a DCF analysis helpful in corroborating their reliance on the deal price in determining fair value. *E.g.*, *Lender Processing*, 2016 Del. Ch. LEXIS 189, at *89 ("The proximity between th[e] outcome [of the court's DCF analysis] and the result of the sale process is comforting."); *Ancestry.com,* 2015 Del. Ch. LEXIS 21, at *23 (the fact that DCF analysis yielded a value reasonably close to the deal price gave the court "comfort that no undetected factor skewed the sales process").

On the other hand, we concur with the legal premise, articulated by the Delaware Supreme Court in *DFC* and *Dell*, that fair value in appraisal proceedings should not be found to exceed the result of a sale process that is disinterested and reasonable. We further submit that the Delaware courts have developed and applied a standard that can appropriately be used to determine when a sale process has been reasonable: namely, the standard of enhanced scrutiny, for reasonableness, as formulated and used in the courts' *Revlon* jurisprudence.[228] Application of that standard would avoid concerns that a presumption in favor of using the deal price to establish fair value (a "market price rule") would eliminate bidders' incentives to pay appropriately high prices: a bidder seeking to take advantage of a conflicted or inadequate sale process would not be able to presume that its exposure in appraisal litigation would be limited to the deal price (plus prejudgment interest); to the contrary, the bidder (the real party in interest in appraisal litigation) would be required to bear the initial burden of establishing that the sale process was unconflicted and fell within at least a range of reasonableness. That approach, coupled with a viable prospect of appraisal arbitrage, would give bidders for public companies an incentive to avoid demands for unreasonably accelerated bidding deadlines or unusually stringent deal protections, at least without being satisfied that the target company has engaged in a robust pre-signing market check.

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[228] Absent faithful implementation of the special committee and majority of the minority vote protections specified in *Kahn v. M&F Worldwide Corp.*, 88 A.3d 635, 644 (Del. 2014), that standard would certainly not apply in the case of a freezeout merger effected by a controlling stockholder. In that situation, therefore, we would not expect the court to rely on the merger price to measure fair value. Although the court in that situation might take into account the price that might be achieved in a hypothetical sale to a third party (*Cornfields*, note [ ] above, 31 J. CORP. L. at 151-152), that hypothetical price lacks the legitimizing imprimatur of actual market behavior, and would presumably not be entitled to the sort of deference contemplated by the Delaware Supreme Court's recent opinions in *DFC* and *Dell.*

If the Delaware courts continue to rely on the deal price to measure fair value in appropriate cases, they will increasingly be required to implement the settled legal mandate that merger gains that are solely attributable to the merger and that are included in the deal price must be deducted from that price in order to arrive at fair value. The case law and the finance literature addressing how such a deduction should be determined are sparse. Our intuition is that the craft of responsibly estimating such a deduction – by estimating overall merger gains and estimating how much of them are shared with target stockholders through the deal price – will become more refined, just as the courts' treatment of discounted cash flow analysis became more refined with experience after its initial acceptance in *Weinberger v. UOP*. We expect in this regard that bidders will develop more detailed evidence of anticipated synergies, and that if they do so in the context of evaluating their bids and preparing to implement post-merger business plans, the courts will be more inclined to accept such evidence than would be the case with synergy estimates prepared solely for litigation purposes.

Even with these refinements of the appraisal remedy, the courts' well-developed familiarity with the ins and outs of discounted cash flow analysis will not become obsolete. Most obviously, that valuation technique will continue to be the primary guide to determining fair value in cases in which the deal price cannot be relied upon.[229] And even in cases where the deal price can be advocated as the appropriate valuation determinant, courts are likely to continue to be guided by discounted cash flow valuations, if only to help evaluate the plausibility of contentions that the deal process was reasonable and that proposed synergy deductions are appropriate.

[229] This is precisely the approach adopted by the Court of Chancery in its recent opinion in *AOL*. *Id.*, slip op. at 24 (where deal price was found to be insufficiently reliable to measure fair value, "a discounted cash flow analysis is the best way to value the Company.").

APPENDIX*

Case	Year	Conflict?	Deal Price	Fair Value	% diff.
Straight Arrow Publishers	1998	No	$100.00	$262.96	97%
Allenson v. Midway Airlines	2001	No	$0.01	$0.01	0%
Cytokine Pharmasciences	2002	Yes	N/A	$1,114	N/A
Union Financial Group	2003	No	$8.74	$8.74	0%
American Specialty Retailing	2003	No	$2,200.00	$9,079.43	142%
Montgomery Cellular Holding	2004	Yes	$8,102.23	$19,621.74	88%
MedPointe Healthcare, Inc.	2004	No	$20.44	$24.45	18%
JRC Acquisition Corp.	2004	Yes	$13.00	$13.58	4%
Emerging Communications	2004	Yes	$10.25	$44.95	148%
Cancer Treatment Centers	2004	Yes	$260.00	$1,345.00	164%
Coleman Co., Inc.	2004	Yes	$9.31	$32.35	125%
Gholl v. eMachines	2004	Yes	$1.06	$1.64	44%
US Cellular (Janesville)	2005	Yes	$43.85	$54.00	21%
US Cellular (Sheboygan)	2005	Yes	$21.45	$30.13	34%
Andaloro v. PFPC	2005	Yes	$34.26	$32.81	-4%
In re PNB Holding Co.	2006	No	$41.00	$52.34	24%
Gesoff v. IIC Industries	2006	Yes	$10.50	$14.30	31%
Delaware Open MRI v. Kessler	2006	Yes	$16,228.55	$33,232.26	72%
Dr. Pepper Bottling Co.	2007	No	$25.00	$32.31	26%
AXA Financial	2007	No	$31.00	$24.97	-22%
In re Appraisal of Metromedia	2009	No	$9.52	$38.92	141%
Hanover Direct	2010	No	$0.25	$0.25	0%
Global GT v. Golden Telecom	2010	Yes	$105.00	$125.49	18%
Gearreald v. Just Care, Inc.	2012	No	$40,000,000	$34,244,576	-16%
In re Orchard Enterprises	2012	Yes	$2.05	$4.67	82%
American Commercial Lines	2013	No	$33.00	$38.16	15%
Merion Capital v. 3M Cogent	2013	No	$10.50	$10.87	3%
Huff Fund v. CKx.	2013	No	$5.50	$5.50	0%
Towerview LLC v. Cox Radio	2013	Yes	$4.80	$5.75	18%
3M Cogent	2013	No	$10.50	$10.87	3%
Laidler v. Hesco	2014	Yes	$207.50	$364.24	56%
Ancestry	2015	No	$32.00	$32.00	0%
LongPath Capital v. Ramtron	2015	No	$3.10	$3.07	-1%
Merlin Partners LP v. Autoinfo	2015	No	$1.05	$1.05	0%
Merion Capital v. BMC	2015	No	$46.25	$46.25	0%
Owen v. Cannon	2015	Yes	$19.95	$31.94	47%
AutoInfo	2015	No	$1.05	$1.05	0%
DFC Global Corp	2016	No	$9.50	$10.21	7%
Dell	2016	Yes	$13.75	$17.62	25%
Dunmire v. F&M	2016	Yes	$83.00	$91.90	10%
Lender Processing	2016	No	$37.14	$37.14	0%

In re Petsmart	2017	No	$83.00	$83.00	0%
In re SWS Group	2017	No	$6.92	$6.38	-8%
Clearwire	2017	Yes	$5.00	$2.13	-85%
Aruba Networks	2018	No	$24.37	$17.12	-35%
AOL	2018	No	$50.00	$48.70	-3%

* This Appendix lists Delaware appraisal cases since 1997, and recites for each such case the deal price, the fair value established by the court, and the percentage difference between those two figures (specifically, the log of the court's fair value determination minus the log of the deal price). The entry under the heading "Conflict?" denotes whether the underlying transaction was an "interested transaction" as defined in Model Business Corporation Act § 13.01. In recent cases (*Dell*, for example), the fair value judgment of the Court of Chancery specified in this Appendix may not be final (*i.e.*, may be subject to appeal or revision on remand).