Via Electronic Mail

February 12th, 2022

Vanessa A. Countryman
Secretary
U.S. Securities and Exchange Commission
100 F Street NE
Washington, DC 20549-1090

Re: File No. S7-06-22: Modernization of Beneficial Ownership Reporting

Dear Ms. Countryman:

I am writing in response to the SEC's proposed Rule 13d-3(e), and specifically the request for comment in ¶¶ 42-44. The limitation of Rule 13d-3(e) applicability—to those acquiring or holding cash-settled derivative securities with the purpose or effect of changing or influencing control of the issuer—creates an unnecessary evidentiary burden. Intent to effect or influence control should be presumed. Moreover, applicability of Rule 13d-3(e) should be extended to security-based swaps to address perceived inadequacies in the applicability and breadth of disclosure under Proposed Rule 10B-1.

First, cash-settled, U.S. equity-linked derivative securities and/or swaps implicating the 5% reporting threshold are predominantly held to avoid disclosure. There are four primary reasons to own a derivative security/swap in lieu of direct equity share ownership: (1) exposure to non-deliverable markets; (2) jurisdictional tax arbitrage; (3) leverage; and (4) avoidance of 13d-3 Beneficial Ownership. Reason (1) does not implicate the onshore U.S. market. Reason (2) is not likely applicable to the U.S. market, subsequent to implementation of withholding tax on dividend-equivalent amounts under I.R.C. § 871(m) (moreover, tax avoidance is not a valid reason to allow avoidance of beneficial ownership disclosure requirements). Reason (3) is not distinguishable from margin-financed share ownership, other than for passive institutional investors who by mandate do not have access to leveraged financing. Rather, it is Reason (4)—avoidance of 13d-3 Beneficial Ownership—which is the predominant use of instruments implicating the 5% reporting threshold.

Second, the settlement terms of ISDA-standard, cash-settled, equity-linked derivatives provide a contractual option—unilaterally exercisable by the long counterparty—to convert to physical shares at a pre-determined price, with minimal price friction. The *CSX* court and previous SEC guidance contemplated the possibility that long and short parties to a cash-settled swap might *bilaterally* agree to an exchange of underlying shares. However, they did not appear to contemplate that—even if the short party does not agree to a *bilateral* exchange—the long party may *unilaterally* effect an exchange to physical shares. This is because the final price at which a swap settles is a market-reference price—typically VWAP or market-close—against which the long counterparty can execute a purchase order with minimal tracking error. Said otherwise, cash-settled, equity-linked instruments create a *de facto* 13d-3(d) call option, out of which the long party cannot contract.

Third, applicability of Rule 13d-3(e) should be extended to security-based swaps to cover perceived inadequacies in both the applicability and breadth of disclosure under Rule 10B-1. Unlike 10B-1, Rule 13d was promulgated under a statute which permits disclosure of individualized participant identity and transactional purpose. Accordingly, Schedule 13D could be used to elicit and disseminate the information with which the SEC appears concerned in proposing Rule 10B-1. First, Rule 13d allows for public dissemination of individualized participant identity. Second, Rule 13d applies to both onshore and offshore transactions. Third, Rule 13d requires detailed, qualitative descriptions of transactional purpose.

Fourth, applicability of Rule 13d-3(e) should be extended to security-based swaps because the prevalent use of cash-settled, equity-linked swaps implicate Rule 13d-3 to a greater extent than either cash or physically-settled derivative securities. From the long counterparty perspective, non-swap equity-linked derivatives—paradigmatically, options—are used primarily to obtain a cash profit from bets on pricing parameters and/or "optionality." In contrast, equity-linked swaps are used primarily to avoid Beneficial Ownership.

Consequently, the SEC should expand Rule 13d-3 Beneficial Ownership to the delta-adjusted notional of any instrument—whether cash or physically settled, and whether a derivative security or security-based swap—which references a security subject to Rule 13d-3. Conferral of Beneficial Ownership should not be conditioned on proving intent to effect or influence control; rather, such intent should be presumed in securities implicating the 5% reporting threshold.

To support this argument, I have attached the following two documents:

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(1) A copy of a letter dated February 4, 2022, which I previously submitted in response to Rule 10B-1. That comment argues for an expansion of Rule 13d-3 to cash-settled, equity-linked swaps, and demonstrates – through illustrative examples – the *de facto* 13d-3(d) call option embedded in cash-settled, equity-linked swaps. A more detailed analysis—addressing the applicability of Rule 13d-3(a)-(b) to swaps—is available upon request.

(2) A comparison of the 13d-3 rights inhering in equity-linked call options and total return swaps, demonstrating that prevalent use of equity-linked swaps implicates Rule 13d-3 to a greater extent than equity-linked options.

Sincerely,

/s/ Wm. Robertson Dorsett
Wm. Robertson Dorsett
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CC:
The Honorable Gary Gensler, Chair
The Honorable Hester M. Peirce, Commissioner
The Honorable Allison Herren Lee, Commissioner
The Honorable Caroline A. Crenshaw, Commissioner

Attachment 1: 04-Feb-2022 Letter to SEC [p. 3]
Attachment 2: Comparison of 13d-3 Rights Inhering in Call Options and TRS [p. 14]

Via Electronic Mail   February 4th, 2022

Vanessa A. Countryman
Secretary
U.S. Securities and Exchange Commission
100 F Street NE
Washington, DC 20549-1090

> **Re:**   **File No. S7-32-10: Proposed Prohibition Against Fraud, Manipulation, or Deception in Connection with Security-Based Swaps; Prohibition against Undue Influence over Chief Compliance Officers; Position Reporting of Large Security-Based Swap Positions; Release No. 34-93784**

Dear Ms. Countryman:

Attached please find a comment in response to Release No. 34-93784, and in particular Proposed Rule 10B-1. My comment proposes that the SEC expand Rule 13d-3 Beneficial Ownership to the delta-adjusted notional of any instrument – whether cash or physically settled – which references a security subject to Rule 13d-3. Doing so would address what I perceive to be inadequacies in both the applicability and breadth of disclosure under Proposed Rule 10B-1.

This result is contemplated by Dodd-Frank § 766(e), which purports to provide the SEC authority to expand the scope of Rule 13d-3 Beneficial Ownership applicability, with specific regard to security-based swaps. This result is also achievable under the existing language of Rule 13d-3(d) – a provision that went unanalyzed in both previous written SEC guidance and the *CSX* case law. As my comment explains, the settlement terms of ISDA-standard, cash-settled total return swaps (TRS) provide a contractual option – unilaterally exercisable by the long counterparty – to convert their cash-settled TRS to physical shares at a pre-determined price. This right to obtain shares at a pre-determined price – a right inhering in any instrument with delta sensitivity to a 13d-3 reportable security – should trigger Rule 13d-3(d) for the same reason a physically-settled call option does.

Additionally, the conversion right inhering in TRS would enable an activist investor to rapidly obtain a significant block of voting rights ahead of a record date, (1) without filing a Schedule 13D; (2) without alerting the market to the full scope of buying interest; and therefore (3) at a lower cost than would be incurred through an outright purchase of shares in the open market.

Consequently, TRS should confer Rule 13d-3 Beneficial Ownership, because the contractual conversion right both (1) satisfies Rule 13d-3(d); and (2) implicates the original concern of Rule 13d-3 and the 1968 Williams Act – rapid acquisition of voting rights without adequate public disclosure of interest.

Sincerely,
/s/ Wm. Robertson Dorsett
Wm. Robertson Dorsett

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cc:
The Honorable Gary Gensler, Chair
The Honorable Hester M. Peirce, Commissioner
The Honorable Allison Herren Lee, Commissioner
The Honorable Caroline A. Crenshaw, Commissioner

This comment proposes that the SEC expand Rule 13d-3 Beneficial Ownership to the delta-adjusted notional of any instrument – whether cash or physically settled – which references a security subject to Rule 13d-3. This would impact cash-settled, equity-linked total return swaps (TRS) in particular, as well as any instrument with a first-order delta sensitivity to reportable securities (including, for example, synthetic forwards). An expansion of Rule 13d-3 would address inadequacies in both the applicability and breadth of disclosure under Proposed Rule 10B-1.

Upon request, a more detailed version of this analysis is available, covering (1) the legislative history of Rule 13d-3, from the Williams Act through Dodd-Frank; (2) the relevant CSX case law and SEC guidance; (3) an argument that Rule 13d-3(a) is satisfied by the guaranteed hedging activity of the short counterparty; (4) an argument that the mental intent element of Rule 13d-3(b) consists of a reckless knowledge standard – met by prevalent TRS usage; and (5) an argument that TRS in fact implicate Rule 13d-3(d) to a greater extent than physically-settled call options, as demonstrated through an explanation of option pricing parameters and the "greeks," and illustrative examples.

I.   Author's Response to 10B-1 and Proposal to the SEC

Proposed Rule 10B-1 would mandate regulatory disclosure and public dissemination of, *inter alia*, cash-settled, equity-linked total return swaps (TRS). The rule may both overshoot the scope and undershoot the aims of its authorizing statute – the Dodd-Frank Act – in several ways.

First, Rule 10B-1 would require disclosure of individual market participant identity,[1] which would "not be confidential and would be publicly available."[2] This public disclosure of swap participant identity appears to contradict the confidentiality mandate of Dodd-Frank § 763(i).[3] Second, public dissemination would apply only to those swap participants required to report under Rule 908 of Regulation SBSR[4] – a group which by the SEC's own admission would not implicate some non-U.S. investors.[5] This inapplicability to certain offshore transactions may

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[1] Securities and Exchange Commission, Release No. 34-93784 (Dec. 15, 2021) at 83 (*available* at https://www.sec.gov/rules/proposed/2021/34-93784.pdf) ("2021 SEC Swap Release").
[2] 2021 SEC Swap Release at 111.
[3] 15 U.S.C. § 78m(m)(1)(C);(E).
[4] 17 C.F.R. § 242.908; 2021 SEC Swap Release at 88.
[5] 2021 SEC Swap Release at 148. *See also* "Regulation SBSR: The Compliance Guide to Reporting Security-based Swaps," Latham & Watkins Client Alert (Mar. 24, 2015) at 4–5, 12.

prevent full public disclosure of the systemic risk at which Dodd-Frank was aimed. Third, 10B-1 does not require swap participants to disclose the "purpose" of their transaction, and requires only a "brief description" of third-party arrangements with regard to the swap and/or related securities.[6] This minimal disclosure may not achieve the SEC's goal of market transparency.

The SEC might better meet its Dodd-Frank mandate, and achieve the goals of 10B-1, by either (1) amending Rule 13d-3 to explicitly encompass security-based swaps – as contemplated by Dodd-Frank § 766(e);[7] or (2) providing clarification that the option embedded in the settlement terms of TRS – and equity-linked instruments generally (whether cash or physically settled) – confers Beneficial Ownership pursuant to Rule 13d-3(d).

Unlike 10B-1, Rule 13d was promulgated under a statute which permits disclosure of individualized participant identity and transactional purpose.[8] Accordingly, Schedule 13D could be used to elicit and disseminate the information with which the SEC appears concerned in proposing Rule 10B-1. First, Rule 13d allows for public dissemination[9] of individualized participant identity.[10] Second, Rule 13d applies to both onshore and offshore transactions. Non-U.S. investors may avoid Rule 13d only if a transaction does not implicate corporate control, and even in such case, they remain subject to year-end[11] 13g filing requirements.[12] Third, Rule 13d requires detailed, qualitative descriptions of both the "Purpose of Transaction,"[13] as well as "Contracts, Arrangements, Understandings, or Relationships with Respect to Securities of the Issuer."[14]

Consequently, this comment proposes that the SEC expand Rule 13d-3 "Beneficial Ownership" to TRS in particular – and equity-linked instruments in general – by expressly amending Rule 13d to encompass the delta-adjusted notional[15] of any instrument (whether cash or physically settled) referencing underlying securities that are themselves subject to Rule 13d-3. Such a rule would achieve the aims of Dodd-Frank without exceeding its scope, and ensure that instruments with delta-sensitivity[16] to 13d reportable equity securities do not evade disclosure.[17]

Alternatively, this comment proposes the SEC to provide clarification that these instruments confer Beneficial Ownership under the existing language of Rule 13d-3(d). As illustrated in the section below, the settlement terms of ISDA-standard TRS provide a contractual option – unilaterally exercisable by the long counterparty – to convert their TRS to physical shares

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[6] 2021 SEC Swap Release at 86–87.

[7] 15 U.S.C. § 78m(o).

[8] This contrast is consistent with the respective aims of Dodd-Frank and the Williams Act, as revealed through their legislative histories. The author's view is that the 2010 Dodd-Frank Act was enacted to reduce systemic, market-wide risk posed by undisclosed securities leverage, while the 1968 Williams Act – which authorized 13d – was enacted to reduce idiosyncratic, security-specific risk posed by undisclosed securities ownership.

[9] 17 C.F.R. § 240.13d-101.

[10] 17 C.F.R. § 240.13d-1(d)

[11] 17 C.F.R. § 240.13d-1(b)(1).

[12] 17 C.F.R. § 240.13d-1(b)(1).

[13] Item 4, 17 C.F.R. § 240.13d-101.

[14] Item 6, 17 C.F.R. § 240.13d-101.

[15] Mirroring the broad definition proposed in Rule 10B-1(b)(6). *See* 2021 SEC Swap Release at 78, Fn. 136.

[16] The first-order derivative of an instrument with respect to the underlying share price.

[17] For example, such a rule would require disclosure of a short put position.

at a pre-determined price. Moreover, this conversion right implicates the original concern of Rule 13d-3 and the Williams Act – rapid acquisition of voting rights without adequate public disclosure of interest.[18] Specifically, the conversion right inhering in TRS would enable an activist investor to rapidly obtain a significant block of voting rights ahead of a record date, (1) without filing a Schedule 13D; (2) without alerting the market to the full scope of buying interest; and therefore (3) at a lower cost than would be incurred through an outright purchase of shares in the open market.

II.   Rule 13d-3(d) Applicability to TRS

Expansion of Rule 13d-3 "Beneficial Ownership" to TRS has been controversial. In the 2008 *CSX* case,[19] Judge Kaplan approached – but ultimately declined – the conclusion that TRS *per se* confer Beneficial Ownership pursuant to Rule 13d-3(a) [voting and/or investment power]. Rather, he concluded the TRS at issue – based on the facts presented – conferred Beneficial Ownership pursuant to Rule 13d-3(b) [plan or scheme to evade]. In his concurrence to the 2011 appeal,[20] Judge Winter argued that TRS do not *per se* confer Rule 13d-3(a) Beneficial Ownership. He also argued for a higher threshold[21] to establish Rule 13d-3(b) Beneficial Ownership – one not met, in his view, by the particular TRS at issue. The SEC Division of Corporation Finance was more equivocal in its 2008 *CSX* amicus letter, leaving open the possibility that a fact-based inquiry could satisfy 13d-3(a), and providing only a limited explanation of the mental intent element necessary to satisfy 13d-3(b).[22]

However, the courts in *CSX* 2008 and *CSX* 2011, and the SEC in their amici curiae, did not address Rule 13d-3(d). In particular, the previous analysis did not recognize that Rule 13d-3(d) inherently applies to TRS and other equity-linked instruments – whether cash or physically settled – for the same reason it applies to physically-settled call options exercisable within sixty days.[23]

The *CSX* courts and SEC did contemplate the possibility that long and short parties to a TRS might *bilaterally* agree to an exchange of shares underlying a TRS, wherein the short party agrees to sell their hedge shares to the long party at the market reference price[24] by which the TRS terminates. What they did not appear to contemplate, however, is that even if the short counterparty does not agree to a *bilateral* exchange, the long party may *unilaterally* effect a

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[18] The Williams Act was originally proposed to combat "[Federal Securities law's] fail[ure] to take proper cognizance of the activities of corporate raiders," as well as the "inadequate disclosure system in regard to cash tender offers," in contrast to stringent disclosure requirements preceding either an exchange offer or proxy contest. 111 Cong. Rec. 28257-58 (1965) (remarks of Senator Williams, "Protection Against Corporate Raiders"). The author's detailed analysis of the legislative history is available upon request.

[19] *CSX Corp. v. Child.'s Inv. Fund. Mgmt. (UK) LLP et al.*, 562 F. Supp. 2d 511 (S.D.N.Y. 2008) ("*CSX* 2008").

[20] *CSX Corp. v. Child.'s Inv. Fund. Mgmt. (UK) LLP et al.*, 654 F.3d 276 (2d Cir. 2011) ("*CSX* 2011").

[21] *E.g.*, an agreement between the short and long counterparties to transfer share ownership or voting power.

[22] The author's detailed analysis of the *CSX* case law and SEC guidance is available upon request.

[23] "A person shall be deemed to be the beneficial owner of a security . . . if that person has the right to acquire beneficial ownership of such security . . . within sixty day, including but not limited to the right to acquire: (A) Through the exercise of any option, warrant, or right . . . provided, however, any person who acquires a security or power specified [above] with the purpose or effect of changing or influencing the control of the issuer . . . immediately upon acquisition shall be deemed to be the beneficial owner of the securities." 17 C.F.R. § 240.13d-3(d)(1)(i).

[24] *E.g.*, market close, or volume-weighted-average-price (VWAP).

conversion of their TRS to physical shareholdings[25] at a pre-determined price.[26] This is because the final price at which a TRS settles is a market reference price – typically, VWAP[27] or market-close – against which the long counterparty can execute a purchase order with minimal tracking error. By doing so, the long party enters their physical shareholding at the same price their TRS swap terminates. This is best illustrated through a hypothetical TRS transaction, as provided below.

II(a). Hypothetical TRS Transaction.

First, note that any investment bank, as short counterparty to a TRS – particularly one implicating the 5% reporting threshold[28] – will undoubtedly hedge their directional exposure,[29] both for practical[30] and regulatory[31] reasons. From the investment bank's perspective, TRS are fundamentally financing transactions – not directional trades. Structurally, TRS are an agreement between the long counterparty and short counterparty, wherein (1) the long party receives and the short party makes payment equivalent to any increase in the notional value of equity shares referenced, as well as dividends; (2) the long party pays and the short party receives payment equivalent to any decrease in the notional value of equity shares referenced; and (3) the long party pays and the short party receives interest on the notional value of the shares referenced. Consequently, the short party will hedge its directional and dividend exposure by purchasing the number of shares referenced by the TRS, ensuring the amount they pay/receive to/from the long counterparty is equivalent to performance accrued and dividends received from ownership of physical shares.

To establish that the long counterparty investor always retains a right to acquire Beneficial Ownership of the shares underlying a TRS, we need only examine the long

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[25] For a discrete TRS with a fixed termination date, this right is exercisable at the termination date, but also at any time the short counterparty is reasonably obligated to agree to an unwind of the TRS. For a TRS terminable at the short counterparty's contractual election (*see infra*, note 35), this right is exercisable at any time. Consequently, this right should be seen as exercisable – with reasonable notice – at any time by the long counterparty.

[26] And at no additional cost, excluding brokerage commission, and allowing for small tracking error.

[27] Volume-weighted-average-price.

[28] 17 C.F.R. § 240.13d-1(a).

[29] In his *CSX* 2011 Concurrence, Judge Winter noted that the short counterparty was free to direct their own hedging activity, noting the existence of a hypothetical transaction wherein the short counterparty would opt not to hedge the directional exposure of their hedge shares. "Had the banks chosen, for whatever reason, not to hedge their short swap positions with a purchase of shares, not to sell all their hedge shares once the swaps had terminated, to alter their hedging methods and sell the hedge shares before the swaps were unwound, or to sell those shares to a competing would-be acquirer of CSX, the Funds would have lacked any means, legal or moral, to compel the bank to alter that choice or even to inform the Funds of their actions." *CSX* 2011 (Winter, J., concurring) at 299 (internal citation omitted). While it is true the short counterparty is not contractually obligated to purchase hedge shares, it is implausible they would not – particularly in a transaction implicating the 5% reporting threshold.

[30] The exception would be situations wherein the TRS references a basket of stocks, and the notional exposure of one particular stock is small enough that the investment bank opts to hedge that exposure with index futures. This exception is not relevant to TRS implicating the 5% reporting threshold.

[31] While analysis of the Volcker rule is beyond the scope of this comment, a naked share position large enough to implicate the 5% reporting threshold would almost certainly violate the rule's general prohibition on proprietary trading.

counterparty's acquisition rights when the investment bank – as the short counterparty – refuses to exchange[32] their hedge shares. More specifically, we need only examine two sub-situations: (1) where the short counterparty agrees to an early termination but not to a share exchange; and (2) where the short counterparty agrees to neither an early termination nor a share exchange.

Sub-situation (2) is unlikely – with sufficient notice, there are few valid reasons for an investment bank to refuse an early unwind request. Sub-situation (1) is more likely. While the investment bank will have hedged their full directional exposure, they may have done so through a combination of share ownership and third-party TRS agreements. Additionally, the investment bank may have loaned out its hedge shares, and need several business days to recall them.

Regardless, someone in the market – whether (1) the short counterparty investment bank with whom the long counterparty investor originally contracted; or (2) the third-party investment bank with whom the short counterparty investment bank contracted – will be selling hedge shares in the market. Moreover, they will be selling shares at the terms governing the TRS settlement, to match their profit/loss on hedge shares against their loss/profit on the equity leg of the TRS, netting out to leave the investment back with only the financing leg of the transaction. Even were the short counterparty – implausibly[33] – to not hedge their directional exposure, the TRS would nonetheless terminate at a value determined by a market reference price, executable by the long counterparty. Consequently, the long counterparty always retains "the right to acquire beneficial ownership of" the underlying shares at a pre-determined price, and generally retains the right to do so "within sixty days."[34]

II(a)(1). Hypothetical TRS Term Sheet.

The truncated term sheet below includes only those terms relevant to the analysis of Rule 13d-3(d) applicability; namely, the "General Terms" and sub-definitions of "Equity Amount Payable." The terms used are those appearing in the "Confirmations for use with the 2002 ISDA Equity Derivatives Definitions"[35] and accompanying "2002 ISDA Equity Derivatives Definitions,"[36] both of which are produced by the International Swap Dealers Association (ISDA) and serve as a proxy for market-standard terms. A glossary of relevant ISDA terns is included in the Appendix.

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[32] Through a block sale or otherwise.

[33] *See supra*, note 25.

[34] *See* 17 C.F.R. § 240.13d-3(d)(1)(i).

[35] International Swaps and Derivatives Association, Inc. (ISDA), *Confirmations for use with the 2002 ISDA Equity Derivatives Definitions* (2002) ("ISDA *Confirmations*").

[36] International Swaps and Derivatives Association, Inc. (ISDA), *2002 ISDA Equity Derivatives Definitions* (2002) ("ISDA *Definitions*").

Cash-Settled Share Swap Transaction	
General Terms	
Trade Date:	Day T+0
Termination Date:	Day T+90[37]
Shares:	"Public Company"
Exchange:	"Public Exchange"
Equity Amounts Payable:	
Equity Amount Payer:	"Investment Bank" – the Short Counterparty
Equity Amount Receiver:	"Hedge Fund" – the Long Counterparty
Number of Shares:	1,200,000
Equity Notional Amount:	USD $120,000,000
Type of Return:	Total
Initial Price:	$100
Final Price:	The arithmetic mean of the VWAP observed on the three (3) Exchange Trading Days immediately prior to the Valuation Date"
Valuation Time:	3:00 p.m.
Valuation Date:	Day T+90

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[37] Termination Date may or may not be "subject to adjustment in accordance with the [ ] Business Day Convention." ISDA *Confirmations* at 84.

The below flowchart demonstrates that, regardless of Investment Bank (IB) hedging activity, Hedge Fund (HF) is able to convert its TRS to physical shares at the pre-determined, Initial Price of the TRS.

Date		
T+0		***Initial Price: $100** ***Initial Equity Notional Amount: $120mm** ***Hedge Shares held IB: 1.2mm**

*HF requests IB to agree to early unwind on Day T+50

T+40	IB Agrees HF Requests Bilateral Transfer of Hedging Shares at Termination	IB Does Not Agree HF Requests Bilateral Transfer of Hedging Shares at Termination

	IB Agrees	IB Does not Agree	IB Agrees	IB Does not Agree

	VWAP		
T+47	$111	HF purchases 400k shs at VWAP target	IB sells 400k shs at VWAP target
T+48	$109	[Same as above]	[Same as above]
T+49	$110	[Same as above]	[Same as above]

Closing Share Price

		Share Transaction IB sells 1.2mm to HF at $112/share HF pays $134.4mm to IB TRS Transaction IB pays HF [$112 - $100]*[1.2mm] = $14.4mm	Share Transaction IB sells 1.2mm Hedging Shs HF pays avg. $110/shr for 1.2mm shs at cost of $132mm TRS Transaction IB pays HF [$110 - $100]*[1.2mm] = $12mm
T+50	$112		

	VWAP		
T+87	$115		HF purchases 400k shs of Public Company at VWAP target	IB sells 400k shs Public Company targeting VWAP
T+88	$117		[Same as above]	[Same as above]
T+89	$116		[Same as above]	[Same as above]

Closing Share Price

		Share Transaction IB sells block of 1.2mm shs to HF at $114/share HF pays $136.8mm to IB TRS Transaction IB pays HF [$114 - $100]*[1.2mm] = $16.8mm	Share Transaction IB sells its 1.2mm Hedging Shares HF pays avg. $116/shr for 1.2mm shs @ total cost $139.2mm TRS Transaction IB pays HF [$116 - $100]*[1.2mm] = $19.2mm
T+90	$114		

T+90	**HF owns 1.2mm shares of Public Company. Net Cost to HF was $120mm. Cost basis per share = $100.**

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II(a)(3). Summary of Hypothetical TRS Transaction.

As these hypothetical transactions demonstrate, Hedge Fund has a contractual right to acquire 1.2mm physical shares at $100 per share – the Number of Shares and Initial Price, respectively, of the TRS. This should implicate Rule 13d-3(d) for the same reason a call option to purchase 1.2mm shares at $100 per share would implicate Rule 13d-3(d).

This analysis could be expanded to any instrument with delta-sensitivity to a 13d reportable security. The short counterparty to a trade large enough for its delta-adjusted notional to implicate the 5% reporting threshold will hedge their delta exposure. At expiry, the long counterparty will be able to purchase physical shares in an amount equivalent to the instrument's delta, in-line with its settlement terms.

II(b). Rapid Acquisition of Voting Rights – Illustrative Example.

From a broader policy perspective, TRS should trigger Rule 13d because they implicate the original concern of the 1968 Williams Act – rapid acquisition of voting rights without adequate public disclosure of interest.[38] Specifically, the conversion right embedded in TRS would enable an activist investor to obtain a significant block of voting rights ahead of a record date, (1) without filing a Schedule 13D; (2) without alerting the market to the full scope of buying interest; and therefore (3) at a lower cost than would be incurred through an outright purchase of shares in the open market. The below hypothetical is illustrative:

Suppose the Record Voting Date for Public Company is Day T+100. On T+0, Hedge Fund knows it wants to obtain 10% of the voting rights for Public Company by T+100, but also wants to avoid disclosing its ownership and/or ongoing interest to the broader market. One option is for Hedge Fund to purchase the shares in the open market, beginning no earlier than T+91.[39] However, purchasing an average of 1% of Public Company shares each day would likely impact the market's supply/demand balance, and therefore increase the cost of acquisition. Additionally, while Hedge Fund would not be required to publicly disclose their holdings prior to the Record Voting Date, the market would nonetheless be alerted to significant buying interest in Public Company shares. Accordingly, the market offer price would increase.

Alternatively, Hedge Fund could instruct Investment Bank to purchase 10% of Public Company Shares over a longer period, and then exercise their TRS conversion right on T+100. For example, Hedge Fund could instruct Investment Bank to purchase Public Company Shares equivalent to 0.1% of shares outstanding and write a TRS, each day from T+0 to T+99. Each TRS could have an Initial Price equal to the price at which Investment Bank is able to purchase shares, an expiry of Day T+100, and Final Price equal to VWAP on Day T+100. By the end of Day T+100, Hedge Fund will own TRS referencing 10% of Public Company Shares, and Investment Bank will own 10% of Public Company as Hedge Shares.

On Day T+100, Investment Bank could agree to terminate all the TRS at a market price, and sell its Hedge Shares to Hedge Fund at that same price. If, for some reason, Investment Bank does not agree to the bilateral hedge share transfer (ignoring practical[40] and regulatory[41] restraints), Hedge Fund can purchase shares with a VWAP instruction over the day, equivalent to 10% of Public Company shares outstanding, confident that Investment Bank will have an equivalent amount of Hedge Shares to sell in order to close out and make payment on the TRS.[42]

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[38] *See supra*, note 17.

[39] So that all purchases will fall within the 10d reporting window [17 C.F.R. § 240.13d-1(a)], and there will be no need to file a Schedule 13D until after the Voting Record Date.

[40] *See supra*, notes 29-30.

[41] *See supra*, note 31.

[42] Suppose that Investment Bank did not sell hedge shares. First, note that Hedge Fund's significant demand would push VWAP up over the day, increasing the VWAP price and therefore, increasing the payment due by Investment Bank to Hedge Fund pursuant to the TRS. Second, note that this would leave the Investment Bank with delta exposure – a highly concentrated directional bet on a

Thus, Hedge Fund will have obtained 10% of Public Company voting rights, without the price impact of either (a) public disclosure of ownership through a Schedule 13D; or (b) creation of a supply/demand imbalance in the market through high-volume daily purchases.

III.   Summary and Proposal to the SEC

Proposed Rule 10B-1 may both exceed the scope and fall short of the aim of its authorizing statute, the Dodd-Frank Act. First, the public disclosure of participant identity may contradict Sec. 763(i). Second, the exemption from public disclosure of certain offshore transactions may prevent full disclosure of the systemic risk at which Dodd-Frank was aimed. Third, the limited qualitative description of transactional purpose and third-party arrangements may frustrate the SEC's goal of market transparency.

The SEC's goals could be better achieved through Rule 13D, which – unlike Rule 10B-1 – was promulgated under a statute better suited to disclosure of individualized participant identity and transactional purpose. As such, Schedule 13D could be used to elicit and disseminate the information with which the SEC appears concerned in proposing Rule 10B-1. This result was contemplated by Dodd-Frank Sec. 766(e).

Additionally, while expansion of Rule 13d-3 Beneficial Ownership has been controversial, much of that controversy stemmed from a mischaracterization and misunderstanding of cash-settled, equity-linked instruments, and in particular TRS. Most importantly, previous analysis failed to recognize that settlement terms of ISDA-standard TRS provide a contractual option – unilaterally exercisable by the long counterparty – to convert their TRS to physical shares at a pre-determined price. This right to obtain 13d reportable securities at a pre-determined price – a right inhering in any instrument (whether cash or physically settled) with first-order delta sensitivity to 13d reportable securities – should trigger Rule 13d-3(d) for the same reason a call option triggers Rule 13d-3(d). Additionally, TRS should trigger Rule 13d-3 because the contractual conversion right implicates the original concern of the 1968 Williams Act – rapid acquisition of voting rights without adequate public disclosure of interest. The contractual conversion right inhering in TRS would enable an activist investor to rapidly obtain a significant block of voting rights ahead of a record date, (1) without filing a Schedule 13D; (2) without alerting the market to the full scope of buying interest; and therefore (3) at a lower cost than would be incurred through an outright purchase of shares in the open market.

Consequently, the SEC should amend Rule 13d-3 Beneficial Ownership to encompass the delta-adjusted notional of any instrument – whether cash or physically settled – referencing underlying securities that are themselves subject to Rule 13d-3. Alternatively, the SEC should provide clarification that these instruments confer Beneficial Ownership under the existing language of Rule 13d-3(d).

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significant percentage of a single company's shares outstanding. Investment Bank would be left to sell those shares, which, absent the large Hedge Fund buyer in the market in subsequent days, will likely decline in price. Moreover, as mentioned above, from the perspective of an investment bank, the TRS is fundamentally a financing transaction. It would not be within the mandate of the executing desk to take a directional bet on the underlying shares. Even supposing the executing desk had *some* directional discretion, that discretion would not be large enough to encompass a directional bet implicating the 5% reporting threshold. Moreover, as mentioned *supra*, note 31, a naked share position of such size would almost certainly violate the Volcker Rule's general prohibition on proprietary trading.

Appendix: ISDA TRS Glossary

(1) **Trade Date** "means . . . the date specified."[43]

(2) **Termination Date** is either "subject to adjustment in accordance with the [ ] Business Day Convention;"[44] or; if not specified; subject to adjustment only upon agreement of both parties.[45]

(3) **Shares** "means . . . the shares specified."[46]

(4) **Exchange** "means . . . each exchange or quotation system specified."[47]

(5) **Equity Amount Payer** means the long counterparty – the party paying positive performance, and receiving the absolute value of negative performance, on the underlying shares.

(6) **Equity Amount Receiver** means the Short Counterparty – the party receiving positive performance, and paying the absolute value of negative performance, on the underlying shares.

(7) **Number of Shares** "means . . . the number of Shares specified."[48]

(8) **Equity Notional Amount** means "the Number of Shares multiplied by the Initial Price."[49]

(9) **Rate of Return** means [Final Price – Initial Price] / [Initial Price][50]

(10) **Equity Amount** "means . . . an amount . . . equal to the product of the Equity Notional Amount and the Rate of Return."[51]

(11) **Type of Return** means either

    a. **Price Return**

        i. "[I]f the Equity Amount . . . is a positive number, then [the] Equity Amount Payer will pay . . . to the Equity Amount Receiver the Equity Amount."[52]

        ii. "[I]f the Equity Amount . . . is a negative number, then the Equity Amount Receiver will pay . . . to the Equity Amount Payer the absolute value of the Equity Amount."[53]

    b. **Total Return**

        i. Provides for additional provision of dividend, either through cash payment or increase in Equity Amount.

(12) **Initial Price** "means, in respect of the first Valuation Date . . . the price specified . . . and in respect of each subsequent Valuation Date, the Final Price for the Valuation Date immediately preceding such Valuation Date."[54]

(13) **Final Price** "means, in respect of each Valuation Date . . . the price per Share determined . . .as provided in the related Confirmation as of the Valuation Time on the Valuation Date or, if no means for determining the Final Price are so provided: (i) in respect of any Share for which the Exchange is an auction or 'open outcry' exchange that has a price as of the Valuation Time at which any trade can be submitted for execution, Final Price shall be the price per Share as of the Valuation Time on the Valuation Date, as reported in the official real-time price dissemination mechanism for the Exchange."[55]

(14) **Valuation Time** "means the time on the relevant Valuation Date or Averaging Date . . . specified . . . or, if no such time is specified, the [scheduled or actual closing time]."[56]

(15) **Valuation Date(s)** "means . . . each date specified . . . (or, if such date is not a Scheduled Trading Day, the next followed Scheduled Trading Day;"[57] where "'Scheduled Trading Day' means any day on which each Exchange . . . [is] scheduled to be open."[58]

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[43] ISDA *Definitions* at 2.

[44] ISDA *Confirmations* at 84.

[45] "Termination Date" means the date specified as such for a Swap Transaction, which date is the last day of the Term of the Swap Transaction. The Termination Date shall not be subject to adjustment in accordance with any Business Day Convention unless the parties specify in a Confirmation that the Termination Date will be adjusted in accordance with a specified Business Day Convention." International Swaps and Derivatives Association, Inc. (ISDA), *2000 ISDA Definitions* (2000).

[46] ISDA *Definitions* at 2.

[47] ISDA *Definitions* at 3.

[48] ISDA *Definitions* at 2.

[49] ISDA *Confirmations* at 85.

[50] ISDA *Definitions* at 15.

[51] ISDA *Definitions* at 25.

[52] ISDA *Definitions* at 25.

[53] ISDA *Definitions* at 25.

[54] ISDA *Definitions* at 15.

[55] ISDA *Definitions* at 15. This comment does not consider shares on a "dealer exchange or dealer quotation system," wherein the mid-point of the prevailing highest bid and lowest ask constitutes the Final Price.

[56] ISDA *Definitions* at 16.

[57] ISDA *Definitions* at 16.

[58] ISDA *Definitions* at 4.

Section I. Comparison of Physically-Settled Call Options Satisfying 13d-3(d) and Cash-Settled Total Return Swaps.

Rule 13D applicability to physically-settled call options is irreconcilable with Rule 13D inapplicability to cash-settled TRS.

First, both instruments confer a contractually-based right to acquire physical shares. Call options confer an *express* contractual right, while TRS confer a *de facto* contractual right – embedded in the settlement terms. Importantly, this *de facto* right can be exercised regardless of short-counterparty cooperation. If the short counterparty does not agree to a bilateral sale of hedge shares, the long counterparty can unilaterally acquire those shares through an open-market purchase of shares on the terms by which the TRS settles; namely, the volume-weighted-average-price (VWAP) of a pre-defined period, or the market close of a pre-defined date.

Second, the practical use of TRS implicates Rule 13D to a greater extent than call options. From the long counterparty perspective, TRS are used primarily to delay share acquisition, obtain leverage, or avoid withholding tax – reasons which do not obviate the need for 13D reporting. Conversely, call options are used primarily to obtain a cash profit from bets on pricing parameters[59] and/or exposure to "optionality"[60] – reasons which are not contemplated by Rule 13D.

Third, short counterparty hedging treatment of TRS implicates Rule 13D to at least the same extent as call options. The short counterparty to a TRS is entering a financing transaction, and therefore hedges directional share price exposure through ownership of physical shares. Similarly, the short counterparty to a call option[61] is taking a bet on options pricing parameters and/or "optionality," and therefore also hedges directional share price exposure through ownership of physical shares.

To establish that Rule 13D should apply equally to both instruments, the below section compares Rule 13d-3 rights inhering in, and short counterparty hedging treatment of, physically-settled call options and cash-settled TRS. To that end, this section provides (1) generalized descriptions; (2) key contractual terms; and (3) hypothetical transactions illustrating share hedging treatment, for both instruments. A more detailed explanation of options pricing parameters and "optionality" is provided in Appendix C, and a more detailed explanation of physical v. cash settlement is provided in Appendix D.

Both Section IV and Appendices C and D are written based on the author's experience as an equity derivative and convertible debt salesperson, and conversations with current and former market participants (though any errors are the author's own). The SEC should canvass market participants and – to the extent they are able to confirm the accuracy of the below assertions – provide rulemaking to unambiguously confer 13(d) beneficial ownership on the delta-adjusted notional[62] of any instrument – whether cash or physically settled – which references underlying securities subject to Rule 13d-3.

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[59]Including, *inter alia*, share price, strike price, exercise period, volatility, expected dividend, expected interest rate, expected borrow rate. *See* Appendix C.

[60] Including, *inter alia*, the non-linear sensitivity of a call option with respect to the linear movement of share price (Delta and Gamma); the change in market demand for options; and the gap between actual and implied volatility. This paper deliberately uses the broader term "optionality" – as opposed to "convexity" – to avoid confusion. "Convexity" might be understood as limited to volatility-related transactions, or an even more limited subsection thereof. *See* Appendix C.

[61] Here, considering the writer of a call option implicating the 5% reporting threshold.

[62] Mirroring the definition in proposed Rule 10B-1(b)(6). *See* 2021 SEC Swap Release at 78, Fn. 136.

I(A). Physically-Settled Call Options.

I(A)(1). General Description.

A physically-settled call option represents the right – but not the obligation – to purchase shares at pre-determined price up to a pre-determined date.[63] Pursuant to Rule 13d-3(d), so long as the owner of the call option may exercise the right to purchase shares within 60 days, they will be deemed a 13(d) Beneficial Owner of those shares. Consequently, at any point during the lifetime of an American option[64] – the market standard expiry – and within 60 days of a European option expiry,[65] the holder of a call option referencing equity shares will be subject to 13(d) Beneficial Ownership reporting requirements.[66]

I(A)(2). Key Contractual Terms.

The key terms governing a call option – with respect to 13D beneficial ownership – are as follows:

(1) Expiry type: European – exercisable at the time of expiry – or American – exercisable up to and including the time of expiry.[67]
(2) Strike Price: the price at which the option entitles its holder to purchase shares.
(3) Premium: the cost to purchase the option.
(4) Expiration: the final date on which options are exercisable.
(5) Settlement Type: Physical – settling with receipt of physical shares – or Cash – settling with receipt of cash.[68]

I(A)(3). Illustrative Transaction

Consider the following hypothetical:

Consider the following hypothetical transaction:

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[63] Alternatives, such as floating strike prices or contingent conversions, are beyond the scope of this comment.

[64] Right of exercise on any day up to and including the settlement date.

[65] Right of exercise on settlement date only. Note, however, that American and European option pricing will not differ significantly, as explained in Appendix C.

[66] They would be deemed a Beneficial Owner at all times if the transaction were part of a control transaction – an evidentiary issue.

[67] The majority of options will have an "American" expiry. However, election of "European" expiry would have little impact on price. Intuitively, the holder of a European option could replicate an American option by borrowing shares and selling them short prior to expiry, synthetically locking in a settlement price. There are, however, exceptions. For example, in the case of an American option referencing a high-dividend stock, where receipt of dividend is sufficiently close to option expiry that the value of the dividend exceeds the remaining time value of the option, it may be optimal to exercise the option before settlement. Therefore, there might be a difference in price between a European Option on the same stock, and an American Option which includes all of the rights of the European Option in addition to the early settlement option. *See* Jia Hao, Avner Kalay, and Stewart Mayhew, *Ex-Dividend Arbitrage in Option Markets* (Jan. 29, 2007) available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=931777).

[68] In the case of Physical settlement, the long party will receive physical shares in exchange for receipt of the strike price. In the case of Cash settlement, the long party will receive cash payment equivalent to the difference between the strike price and the "Settlement Price" – a market reference such as the volume-weighted-average-price (VWAP) of a defined period, or the market-close of a defined date. Physical settlement is customary as a result of (1) market convention; and (2) the manner in which share hedging may impact settlement price. These concepts are explained in greater detail in Appendix D.

(1) On Day T+0, Investor purchases from Investment Bank 1mm American call options referencing Public Company, expiring in 90 trading days, at a Strike Price of $105. The current share price is $100, and the expected dividend to be received on Day T+45 is $2/share. The price of each option is $2.3.[69]

(2) On Day T+0, the Delta[70] of each option is ~35%. In order to hedge the directional exposure of their short call option position, Investment Bank must hold 35%*1mm = 350k shares of Public Company.

(3) On Day T+45, shareholders of Public Company on Day T+43 – the Ex-Dividend Date – receive dividends of $2/share. The share price drops by an equivalent amount to reflect this distribution. Our Investor, however, does not receive any dividend payment because she does not yet possess physical shares. Rather, the Option Premium – or price – accounted for an expected dividend of $2/share.[71]

(4) On Day T+60, shareholders of Public Company on Day T+58 – the Record Date – are entitled to vote on Public Company Proposal. Investor, however, is unable to vote because she does not yet possess physical shares.

(5) On Day T+70, by hypothesis, the Share Price equals $105. That is, the Share Price is equivalent to the Strike Price. All else held constant, the value of each Call Option is ~$2.4, and the Delta is ~50%. Thus, in order to hedge the directional exposure of their short call option position, Investment Bank must hold 50%*1mm = 500k shares of Public Company.

(6) On Day T+80, by hypothesis, the Share Price equals $110. All else held constant, the price of each Call option is ~$5.30. This reflects the fact that, if converted today, each option would be worth $110 - $105 = $5, and there is some residual time value[72] to the optionality over the next 10 days. The Delta of each option is ~90%. Thus, in order to hedge the directional exposure of their short call option position, Investment Bank must hold 90%*1mm = 900k shares of Public Company.

(7) On Day T+89, in the hours before the close, the Share Price equals $115. Each Call Option is worth almost exactly $10, and the Delta is 100%, because there is a miniscule amount of value attributable to the remaining hours of optionality.[73] In order to hedge the directional exposure of their short call option position, Investment Bank must hold 100% * 1mm = 1mm shares of Public Company.

(8) Subsequent to expiration on Day T+90 – at $115 per share – Investment Bank delivers to Investor 1mm shares of Public Company, and Investor pays Investment Bank 1mm * $105 = $105mm. Investor may sell her 1mm shares to lock in a profit. Alternatively, Investor may have already sold short a portion – or all – of the 1mm shares, and use receipt of those shares to close out its short position.

(9) Investor's profit equals [$115-$105-$2.3]*[1mm] = $7.7mm.

I(B). Cash-Settled Total Return Swaps.

I(B)(1). General Description.

A cash-settled total return swap is a derivative replication of the economic benefits of a long, leveraged equity position, absent express contractual voting or investment rights. Structurally, it is an agreement between the long counterparty and short counterparty, wherein (1) the long party receives and the short party makes payment equivalent to any increase in the notional value of equity shares referenced, as well as

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[69] Reflecting dividend expectations, prevailing annual interest rate of ~1.5%, and market volatility assumptions of 20%. For ease of replication, this and all options valuations in this paper are calculated using the free pricing tool provided by the Chicago Board Options Exchange (CBOE) at https://www.cboe.com/education/tools/options-calculator/. In this example, "Start Date" is January 3, 2022, with "Expiration Date" of January 3, 2023; all other inputs are as described.

[70] First order derivative of the call option with respect to the underlying share price. *See* Appendix C.

[71] Roughly, by the delta-adjusted equivalent of the expected dividend.

[72] "Theta."

[73] One way to understand this is to consider the relatively low chance – given the volatility assumption of 20% in Note 131 – of the share price decreasing from $115 to $105 in the final hours of trading.

dividends; (2) the long party pays and the short party receives payment equivalent to any decrease in the notional value of equity shares referenced; and (3) the long party pays and the short party receives interest on the notional value of the shares referenced. Typically, the short party views this not as a directional trade, but as a financing transaction. Thus, the short party will hedge its directional exposure by purchasing the number of shares referenced by the total return swap, ensuring that any amount it pays/receives to/from the long party is equivalent to the performance it receives from ownership of the actual shares.

The author is of the view that there are four primary reasons to own a Total Return Swap in lieu of direct equity share or call option ownership: (1) exposure to a non-deliverable market; (2) jurisdictional tax arbitrage; (3) leverage; and (4) avoidance of 13D reporting requirements. The first three are inapplicable to U.S. institutional investors.[74] Within the U.S., avoidance of 13D reporting requirements is the primary use of TRS implicating the 5% reporting threshold.

First, a TRS may enable an investor to gain economic exposure to equity shares in a non-deliverable market. For example, if an investor wants to gain economic exposure to equity shares which trade on the exchange of a country for which it lacks the relevant license to own shares,[75] the Investor may enlist an Investment Bank that holds the relevant license to write a TRS, the performance of which the Investment Bank pays with the profit from shares it has purchased as a hedge. This reason is inapplicable to the fully deliverable U.S. market.

Second, a TRS may enable an Investor to avoid withholding tax to which it would otherwise be subject. For example, an Investor that – based on their domicile – would be subject to withholding tax on dividends from a foreign shareholding, might enlist an Investment Bank which has a subsidiary entity domiciled in that foreign jurisdiction, to purchase the shares on their behalf and pass along some portion of tax savings. This reason may be less applicable in the U.S. market, subsequent to the implementation of withholding tax on dividend-equivalent amounts, under Internal Revenue Code Section 871(m).[76] Moreover, this paper takes the uncontroversial position that tax avoidance is not a valid reason to allow TRS to evade beneficial ownership disclosure requirements.

Third, a TRS provides leverage, to the extent that the notional amount of a TRS exceeds the collateral posted by the long party to the short party. This reason is applicable, but not distinguishable from comparable leverage afforded by margin financing. Moreover, financed share ownership is – equivalently to non-financed share ownership – subject to Rule 13d-3(a) beneficial ownership. A transaction which is in substance identical to transactions subject to Rule 13D, should itself be subject to Rule 13D.

Fourth, a TRS enables an Investor to avoid Rule 13D disclosure requirements. Within the U.S. market – this is the primary reason to hold a TRS that implicates the 5% reporting threshold. This avoidance enables investors to rapidly obtain ownership of shares and voting rights, while avoiding the potential impact to price and hindrance to activist strategies that contemporaneous public disclosure might otherwise cause.

Most importantly, the shares referenced by a TRS can be rapidly obtained – at no significant additional cost – pursuant to either (1) a bilateral transaction with a cooperative short counterparty; or (2) a unilateral purchase in the open market, at terms mirroring TRS settlement terms. Consequently, regardless of whether the short counterparty to a TRS does or does not hedge their directional exposure in part or in full, and does or does not agree to sell its hedge shares to the long counterparty, the long counterparty holds a *de facto* option to exchange their swap into physical shares at no additional cost – a feature that TRS hold in common with the contractual acquisition rights inhering in a call option.

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[74] Other than those institutional investors who, by mandate, do not have access to leveraged financing (e.g. mutual funds, or long-only asset managers).

[75] For example, Taiwan or Vietnam.

[76] *See, e.g.,* "IRS Issues New Final and Temporary Regulations on 'Dividend Equivalent' Payment Withholding," Richard Shapiro (Oct. 22, 2020) (available at https://www.eisneramper.com/dividend-equivalent-withholding-1015/).

This *de facto* option exists as a result of the settlement terms of a TRS. Typically, the contractual clause determining the final valuation of a cash-settled TRS will include language to the effect of "the Final Price will be the Volume-Weighted-Average-Price of Shares sold on market on the Exchange observed on the Valuation Date," [77] or the "the Final Price will be the last traded price per Share quoted on the Exchange on the Valuation Date." Thus, regardless of whether the short counterparty to a TRS agrees to sell hedge shares to the long counterparty, the long counterparty can purchase an equivalent amount of shares in accordance with the settlement terms of the TRS, while ensuring that no additional costs are incurred in transferring the share position from a swap to cash shareholding. For example, if Investor holds a TRS referencing 100 shares of Public Company, with a contractual Final Valuation of the Market Close on Day T, they can transfer the swap to physical shareholdings by placing a buy order at Market Close on Day T – ensuring the TRS terminates at the same price as their new physical shareholding is entered. This would be true even for TRS referencing a number of shares significantly in excess of the normal volume at market close, as – particularly for a large TRS – the long counterparty can be reasonably certain the short counterparty[78] will be selling shares in volume equivalent to their TRS reference shares, in order to obtain the proceeds for contract settlement.

I(B)(2). Key Contractual Terms

The key terms governing a TRS are as follows:

(1) Trade Date: the initial date of the transaction
(2) Termination Date: the date of the final payment between long and short parties
(3) Referenced Shares: the shares referenced by the TRS.
(4) Equity Amount Payable: the amount owed by the short counterparty to the long counterparty, as dictated by (1) number of Referenced Shares;[79] (2) Initial Price of Shares; and (3) Final Price of Shares. The reference prices are typically calculated as either (a) closing price on a given date; (b) the volume weighted average price on a given date; or (c) the actual price at which short counterparty purchases hedge shares.
(5) Interest Amount Payable: the amount owed by the long counterparty to the short counterparty, as dictated by the Notional Amount[80] and Rate Payable.[81]
(6) Dividends: Typically, the short counterparty will pay long counterparty cash equivalent to the amount of dividends received by shareholders.[82]
(7) Settlement: the contractually obligatory settlement considered here is cash payment equivalent to [Final Price] less [Initial Price] multiplied by [Number of Shares]. The long position has no contractual right to acquire shares; rather, they have a *de facto* right, as explained above and further illustrated below.

I(B)(3). Illustrative Transaction.

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[77] Alternatively, "the arithmetic average of the Volume-Weighted-Average-Price . . . observed on the [#] Business Days preceding the Valuation Date."

[78] Or the third-party to whom the short-party has contracted out a portion of their exposure. For example, a short counterparty for whom it is relatively "expensive" to hold hedge shares on the balance sheet might enter into a TRS with another bank for whom it is relatively "cheaper."

[79] For example, a TRS may provide that the long party will receive the economic performance equivalent to 100 shares, between Trade Date and Termination Date.

[80] The prevailing Referenced Share price multiplied by the number of Referenced Shares.

[81] The interest rate – fixed or floating – paid by the long party to the short party.

[82] There may be differing treatment for regulary and extraordinary dividends.

Consider the following hypothetical:

(1) On Day T+0 – the Trade Date – Investor enters into a cash-settled TRS with Investment Bank referencing 1mm shares of Public Company. The Initial Price is calculated as the volume-weighted-average-price on T+0, which by hypothesis is $100. The initial Notional Amount is therefore $100mm, and the Interest Payable is 1.5% p.a., or $1.5mm annually and ~$535k over 90 trading days.[83] The Termination Date is Day T+90, and the Final Price is calculated as the volume-weighted-average-price on Termination Date

(2) On Day T+0, Investment Bank purchases 1mm shares of Public Company to hedge its Delta exposure on the TRS. The Delta of the TRS is constant at 100%; consequently, Investment Bank will continue to own 1mm shares of Public Company throughout the life of the trade.[84]

(3) On Day T+45, shareholders of Public Company on Day T+43 – the ex-Dividend Date – receive dividends of $2/share. Investment bank received this dividend as the owner of Public Company shares. An equivalent cash amount was paid to Investor by Investment Bank.

(4) On Day T+60, those who held shares of Public Company on Day T+58 – the Record Date – are entitled to vote on Public Company Proposal. Our investor is unable to vote because she does not yet possess physical shares.

(5) On Day 80, Investor asks Investment Bank to amend their TRS to settle with a Final Price of the Closing Price on Day T+90, and to execute a block sale of their hedge shares to Investor at that same Final Price.
    a. If Investment Bank agrees, Investor obtains shares at no additional cost.
    b. if Investment Bank does not agree, Investor may still obtain shares at no additional cost. Pursuant to the terms of their TRS, Final Price will be the volume-weighted-average-price (VWAP) on Day T+90. By instructing a broker to purchase 1mm shares with a VWAP instruction on Day T+90, Investor can ensure that they acquire physical shares at roughly the same price their TRS agreement contractually settles.

(6) On Day T+90 the share price is $115. Investor owns 1mm shares, at a cost of 1mm * $100 = $100mm. Investor holds an unrealized profit of [$115 - $100 + $2]*1mm – [$535k] = $11.465mm.

I(C). Comparison of 13d-3 Rights Inhering in Call Options and TRS.

The owner of a call option receives economic benefits deriving from stock performance; specifically, their profit is equivalent to [Share Price at Expiry] less [Strike Price] less [Option Premium]. They do not retain contractual 13d-3(a)(1) voting power or 13d-3(a)(2) investment power. However, the share hedging treatment of the short counterparty to a call option – particularly one of size sufficient to implicate the 5% reporting threshold – can be predicted with near certainty. This hedging necessarily results in share acquisition and disposition, and changes the shape of aggregate voting rights. While dividend entitlements do not implicate 13d-3 beneficial ownership, they are nonetheless a colloquial "incident of ownership" to which the owner of a call option is not entitled.[85] Rule 13d-3(d) beneficial ownership is conferred on a call option, however, because the option represents a present right to acquire future beneficial ownership.

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[83] $1.5mm * [90/252], where 252 is the number of trading days assumed in a year.

[84] It is true that Investment Bank could decide to enter into a TRS with a third-party investment bank to cover a portion of the TRS with Investor, and thus would not need to hold hedge shares for that portion of the TRS value. However, the hedging analysis remains the same, as at expiry, there will be in aggregate 1mm hedge shares to be sold across the market.

[85] Rather, the cost of their call option was reduced by the present value of the delta equivalent of the *expected* dividend, or the present value of the [Delta] * [Expected Dividend Amount].

By comparison, the owner of a TRS receives the economic benefits of stock performance; specifically, their profit is equivalent to [Share Price at Expiry] less [Share Price at Inception] less [Financing Costs] plus [Dividends]. They do not retain express contractual 13d-3(a)(1) voting power or 13d-3(a)(2) investment power. However, the share hedging treatment of the short counterparty to a TRS – particularly one of size sufficient to implicate the 5% reporting threshold – can be predicted with near certainty. This hedging necessarily results in share acquisition and disposition, and changes the shape of aggregate voting rights. While dividend entitlements do not implicate 13d beneficial ownership, they are nonetheless a colloquial "incident of ownership,"[86] to which the owner of a TRS is entitled, in that they are contractually entitled to a dividend-equivalent payment from the short counterparty. Rule 13d-3(d) beneficial ownership is not currently conferred on a TRS. However, for the purposes of 13d-3(d), there should be little difference between the express contractual right to obtain physical shares conferred by a physically-settled call option, and the *de facto* contractual right to obtain physical shares conferred by the settlement terms of a cash-settled TRS.

The table below illustrates the comparison:

	Physical Equity Share	Cash-Settled, Equity-Linked Total Return Swap	Equity Call Option
Long Party Economic Benefit	[Final Price] - [Initial Price] + [Dividends] - [Funding Cost]	[Final Price] - [Initial Price] + [Dividends] - [Funding Cost]	[Final Price] - [Strike Price] - [Premium Cost] - [Funding Cost]
Short Party Share Hedging	N/A	100%	Prevailing Delta Sensitivity -- Ranging from 0% to 100%
13d-3(a)(1) Investment Power over Underlying Shares	Full	Indirect	Indirect
13d-3(a)(2) Voting Power over Underlying Shares	Full	Indirect	Indirect
Dividend Rights	Full	Dividend Equivalent Amount	None
13d-3(d) Right to Acquire Physical Shares	N/A	*De Facto* Contractual Right	Express Contractual Right

In summary, a physically-settled call option confers 13D beneficial ownership due to the contractual right to share acquisition, despite the fact that call option transactions do not typically implicate corporate control. A cash-settled total return swap provides a *de facto* right to share acquisition, and is more likely to implicate corporate control than a call option. By virtue of the *de facto* "right to acquire" underlying shares embedded in a TRS, a cash-settled Total Return Swap should confer beneficial ownership, pursuant to Rule 13d-3.

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[86] Mirroring the language of 15 U.S.C. §78m(o).

Appendix A. Optionality

App. A(1). Generally Defined.

Options enable an investor to obtain profits from bets on pricing parameters and/or exposure to "optionality."

Pricing parameters[87] include, *inter alia*, share price, strike price, exercise period, volatility, expected dividend, expected interest rate, and expected borrow rate. For example, an option enables an investor to bet on whether a share price will exceed a specific price (the strike price + option premium) within a specific timeframe (the exercise period). This is a significantly narrower bet than that of outright physical share ownership. An option also enables an investor to bet on differences between the parameters used in pricing, and those actually realized. Primarily, this bet is on the difference between the share price volatility implied in options pricing, and the share price volatility the investor expects to be realized.[88]

"Optionality" could be understood to include exposure to, *inter alia*, (1) the non-linear sensitivity of a call option with respect to the linear price-movement of the underlying equity share ("Delta"); (2) the changes in the magnitude of that sensitivity ("Gamma"); (3) the change in market demand for and the price of options ("Vol of Vol"); and (4) the difference between (a) the standard deviation – or volatility – of share price actual realized ("Actual Vol"); and (b) the standard deviation – or volatility – implied by the price of an option ("Implied Vol") or used to price a more bespoke option for which there is not an established market (what this paper will refer to as "Input Vol"[89]).

Profiting from optionality can be understood in several ways, two of which are relevant here. First, profiting from optionality can be understood as profiting from mispriced volatility. Volatility refers to the standard deviation of the underlying asset;[90] here, the equity share price. Consequently, profiting from optionality can be understood as profiting from a mispriced probabilistic assumption of future price *outcome*, or a mispriced standard deviation and therefore mispriced likelihood of large upward price *outcomes* at expiry.

Alternatively, profiting from optionality can be understood as profiting from mispriced delta or gamma. Delta, in the context of call options, refers to the rate at which a call option value changes with respect to the underlying equity share price. Said otherwise, it is the first-order derivative of the call option with respect to the underlying share price. Gamma, in the context of call options, refers to the rate at which the sensitivity of a call option with respect to the underlying equity changes. Said otherwise, it is the second-order derivative of the call option with respect to the underlying equity share price. Consequently, profiting from optionality can be understood as profiting from a "mispriced" probabilistic assumption of future price *movement*, or a mispriced standard deviation and therefore mispriced likelihood of constant upward and downward price *movement* that can be captured through dynamic hedging of first-order exposure – or delta. The concept of gamma capture is explained through an illustrative hypothetical transaction below.

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[87] Options pricing parameters stem primarily from the traditional Black-Scholes model. *See* Fischer Black and Myron Scholes, *The Pricing of Options and Corporate Liabilities*, 81 J. Pol. Econ. 3, 637 (1973) (available at https://www.cs.princeton.edu/courses/archive/fall09/cos323/papers/black_scholes73.pdf). The model was later expanded to account for dividend payments. *See* Robert C. Merton, *Theory of Rational Option Pricing*, 4 Bell J. Econ. & Mgmt. Sci. 1, 141 (1973) (available at http://polymer.bu.edu/hes/merton73py538.pdf).

[88] As a direct extension, a purchase of "cheap" volatility" is also a purchase of "cheap" delta. For example, using the using the free pricing tool provided by the Chicago Board Options Exchange (CBOE) at https://www.cboe.com/education/tools/options-calculator/, a 1-month call option with a $105 strike price, with a current stock price of $100, an interest rate of 1.5%, no dividend assumption, and a volatility assumption of 20%, would have a delta of 21.5%. Increasing the volatility assumption to 30%, for example, would result in a delta of ~31%. In theory, this logic applies to any pricing parameter.

[89] This is not a market-standard term; this paper adopts the term only to distinguish between calculating the volatility assumption implied by the price of an option, and calculating the price of an option that follows from a volatility assumption.

[90] Realized, implied, or assumed.

The distinction between a purchase of delayed acquisition of shares, and a purchase of "optionality" on those shares, is important to understanding why cash-settled total return swaps should confer 13d-3 Beneficial Ownership. A physically settled call option confers 13(d) Beneficial Ownership, despite the primary use of call options to benefit from optionality – rather than to delay acquisition of physical shares – because physically-settled call options confer an express contractual option to acquire physical shares. In contrast, a cash-settled total return swap does not confer 13(d) Beneficial Ownership, despite the primary use of TRS[91] to delay acquisition of physical shares, because cash-settled TRS do not confer an express contractual option to acquire physical shares. However, as explained below, TRS do confer a *de facto* contractual option to acquire physical shares at no additional cost – either from a willing short counterparty or, in the case of an unwilling short counterparty, from the open-market. This *de facto* option, coupled with prevalent usage, supports a conferral of 13(d) beneficial ownership for cash-settled TRS.

App. A(2). Option *Greeks* – Volatility, Delta, & Gamma.

"Optionality" can be understood in terms of the "greeks." Most relevant are the concept of "vega" – sensitivity to volatility – and the separate (though related) concepts of "delta" and "gamma" – the first and second order derivatives with respect to share price.

App. A(2)(a). Volatility

Volatility – also referred to as "Vega" – refers to the annualized standardized deviation of an equity share price, in logarithmic (e.g. percentage) terms. In market parlance, "volatility" might refer to "historical volatility," "implied volatility," or "input volatility." "Historical volatility" refers to the historical standard deviation of an equity share price, actually realized over a preceding period of time. For example, a stock that followed a 10-day price path of: $10, $12, $8, $6, $7, $9, $12, $16, $14, $11 – would have a historical volatility of ~30%.[92]

"Implied Volatility" refers to the expected standard deviation of an equity share price – *not* necessarily realized over any preceding period of time – as implied by the price of an equity option. For example, if the current price of equity shares is $100, and a one-year call option with a strike price of $105 trades at $12.5,[93] the implied volatility would be ~35%.[94]

If that same option had no observable market, to determine the "fair" price of that option would require an assumption about the future volatility – the expected standard deviation – of an equity share price. For example, if we expect the volatility over the next year to realize at something closer to 40%, and use that as "input volatility," the call option would be priced at approximately ~$14.5[95]

To understand the importance of the standard deviation of an equity share price to the price of an option referencing that equity share, note that estimation of the future standard deviation of a share price

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[91] At least those referencing >5% of a security class.

[92]This value is calculated by using the STDEV function in Excel (https://support.microsoft.com/en-us/office/stdev-function-51fecaaa-231e-4bbb-9230-33650a72c9b0), on the set comprised by the natural logarithm of those numbers above, as calculated by the LN function in Excel (https://support.microsoft.com/en-us/office/ln-function-81fe1ed7-dac9-4acd-ba1d-07a142c6118f).

[93] For ease of calculation and comparability, this section assumes a "risk-free" interest rate of 1.5%, no intervening dividends, and no funding/stock borrow considerations. Were it to include a dividend, the value of the option would be decreased by approximately the present value of the delta equivalent of the *expected* dividend, or the present value of the [Delta] * [Expected Dividend Amount].

[94] For ease of replication, this and all option valuations in this paper are calculated using the free pricing tool provided by the Chicago Board Options Exchange (CBOE) at https://www.cboe.com/education/tools/options-calculator/. In this example, "Start Date" is January 3, 2022, with "Expiration Date" of January 3, 2023; all other inputs are as described above.

[95] Calculated at https://www.cboe.com/education/tools/options-calculator/.

determines the probabilistic price distribution which governs – to a significant degree – the value of that option.[96] Assumption of a normal distribution of prices effectively assumes that 68% of the possible price distribution lies within a +/- one standard deviation move, 95% of the possible price distribution lies within +/- two standard deviations move, and 99.7% of the possible price distribution lies within +/- three standard deviations move.[97] The possible price distribution is of paramount importance in considering the value of an option – in contrast to an obligation – to purchase an equity share.

For example, if a call option's price implies an underlying share price volatility of 20%, the share price distribution used to determine the share value assumes that – in one year's time – 68% of the time the price will have increased or decreased by less than 20%[98], 95% of the time the price will have increased or decreased by less than 40%, and 99.7% of the time the price will have increased or decreased by less than 60%.[99] Intuitively, if the implied volatility of an option is 20%, but an investor expects the share price to realize a volatility closer to 40%, they might purchase the option to take advantage of this underpricing of the probabilistic price distribution. Said otherwise, they might purchase the option to take advantage of underpriced optionality. This underpriced optionality could in turn be captured in several ways; for example, through a purely directional bet on the increasing value of the stock, or a bet trading the "gamma" of the option.

App. A(2)(b). Delta and Gamma.

Particularly for shorter-dated options, the purchaser of an option may be primarily concerned with the "gamma" of an option – the second order derivative of an option with respect to the underlying shares. Gamma is related to – though distinct from – volatility.

The first order derivative of an option with respect to the underlying shares is the "delta" of an option. Said otherwise, the delta is the rate of change in the price of an option relative to a change in the underlying stock. For example, a delta of 50% on a call option indicates that if the equity share price increases or decreases by a small, localized amount (e.g. 10c on a stock valued at $100), the call option price will increase or decrease by 50% of that small, localized amount (e.g. 50% of 10c = 5c).[100]

Consider a call option conferring a right to purchase shares at $101 – the strike price – expiring in one-month,[101] with an implied volatility of 30%,[102] under three different price scenarios:

(1) If the equity shares currently trade at $50 per share, the delta is almost zero, and an increase in the underlying share price will have almost no impact on the value of the option. While "delta" is

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[96] Note, however, that options are not priced on the probabilistic payout at expiry, in the sense that there is no odds-maker in the market guessing what price a given share will trade at in one month's time. Rather, an option priced in a vacuum would be priced on something closer to a no-arbitrage constraint. For example, if a call option's implied volatility is 40%, and the realized volatility turns out to be 40%, the price of the call option should not be such that the holder of the call option can obtain a riskless profit by (1) owning the option and (2) dynamically hedging the first-order "delta"" exposure to the share price as it changes (in-line with the second order "gamma" exposure to the share price. These terms are explained in greater detail below.

[97] The "68-95-99.7 Rule." *See* https://en.wikipedia.org/wiki/68%E2%80%9395%E2%80%9399.7_rule.

[98] Technically, the 20% movement would be not from the current share price, but the no-arbitrage-constrained forward price – that is, the current share price, adjusted for interest and less funding costs and distributions.

[99] For periods other than one year, the expected price movement would equal [Volatility %] * [Sqrt(Time)], where "Time" is usually input as [# of trading days remaining] / [# of trading days in a year].

[100] Assuming that a 10c change is "local" – that is, it constitutes no more than a few percentage points change in the stock. If the change is not "local," the delta will not remain constant over the full change in stock price.

[101] Start Date of January 3, 2022; Expiration Date of February 2, 2022, using https://www.cboe.com/education/tools/options-calculator/.

[102] Again, assuming a relevant interest rate of 1.5% p.a., and no intervening dividend payments.

conceptually distinct from "probability,"[103] intuitively this result can be understood to reflect the high probability that the call option will expire worthless.

(2) If the equity shares currently trade at $150, the delta is almost 100%, and an increase or decrease in the underlying share price will have an almost one-for-one impact on the value of the option. Intuitively, this result can be understood to reflect the high probability that the call option will expire with value equal to [share price at expiry] less [the strike price of $101].

(3) If the equity shares currently trade at $100, the delta is closer to 48%, and an increase or decrease in the underlying share price will be shared at a rate of 48% by the call option. Intuitively, this result can be understood to reflect the relatively comparable probabilities that the call option will expire with or without value.

Taken together, these three scenarios help demonstrate that the delta of a call option may take on any value between zero and one.[104] This gamma of an option – or the fact that delta does not remain constant – enables an investor to profit without taking a directional view on the share price underlying the option. That concept is explained in the section below.

App. A(3). Illustrative Example: Gamma Trading.

Consider an Investor owning 100 call options, with a strike price of $105, expiring in one calendar month,[105] with an implied volatility of 30%, and an underlying share price of $100.[106] The delta of this option is ~30%, and the value of the call option ~$1.6. Investor can remove their directional exposure to "local" price moves in the underlying share price by selling short[107] 30% * 100 = 30 shares. These 30 shares have a "delta" of one – reflecting the axiomatic fact that for every $1 increase in the price of shares, the value of those same shares increases by $1. The 100 call options have in aggregate a delta notional equal to [Delta % * Number of Call Options * Price of Shares] = [30% * 100 * $100] = $3,000, and the 30 shares have in aggregate a delta notional of [Delta % * Number of Shares * Price of Shares] = 100% * 30 * $100 = $3,000. Said otherwise, the aggregate notional size of the 30 share position is $3,000; the aggregate notional size of the 100 call options' local sensitivity to the share price is also $3,000. If the share price increases in a small, localized amount by X%, the aggregate notional of the 100 share position will increase by $3,000*X%, and the aggregate notional of the call options' sensitivity to the share price will have also increased by $3,000*X%.

First, this will ensure that for small, localized price moves, Investor incurs neither a profit nor a loss on the combined position. If the share price increases by 10c to $100.10, Investor will lose 10c on 30 shares for a total loss of $3, but gain 30c on 100 call options for a total gain of $3. Thus, the loss on the share price increase is offset by the gain on the call options. Conversely, if the share price decreases by 10c to $99.90, Investor will gain 10c on 30 shares for a total gain of $3, but will lose 30c on 100 call options for a total loss of $3. Thus, the gain on the share price is offset by the loss on the call options. The potential for profit comes

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[103] See *Supra*, Note 247.

[104] This could be seen as a corollary to Intermediate Value Theorem, which states that a continuous function f(x), existing within interval [a,b] must take on all values between f(a) and f(b). Here, f(x) would be the delta of an option, f(a) would be 0% – the minimum delta value – and f(b) would be 100% – the maximum delta value. https://en.wikipedia.org/wiki/Intermediate_value_theorem.

[105] Start Date of January 3, 2022; Expiration Date of February 2, 2022, on https://www.cboe.com/education/tools/options-calculator/. Rounding assumptions were made for simplification.

[106] Again, with a relevant interest rate of 1.5% p.a. and no intervening dividends.

[107] "Selling short" refers to the process of (1) borrowing shares from a broker at an agreed upon interest rate, (2) selling those shares in the open-market, (3) purchasing an equivalent amount of shares in the open-market in the future, and (4) returning an equivalent amount of shares to the broker. This process enables an investor to profit from a decrease in share value.

from the gamma of the call option; that is, the fact that the delta of the option does not stay constant for "non-local" price moves in the underlying share price.

Consider a "non-local" price move in the underlying shares from $100 to $101 – in 25c increments – over the course of the same day. All else constant, at a share price of $100.25, the delta of the call option is ~31.5%. At $100.5, the delta is ~32.5%. At $100.75, the delta is ~33.5%. at $101, the delta is ~35%. This change in delta means that from $100 to $100.25, the value of the call option increases at an average rate between 30% and 31.5% of the increase in share price. From $100.25 to $100.5, the value of the call option increases at an average rate between 32.5% and 33.5%. From $100.5 to $100.75, the value of the call option increases at an average rate between 33.5% and 35%.

When the share price reaches $101, the value of the call option is $1.93, representing a 33c increase in the value of the call option relative to the $1 increase in the value of the shares. The delta of each call option has "dynamically" changed from ~30% to ~35% for an average change of ~33%. The aggregate delta notional of the call options has changed from ~$3,000 to ~$3,500, at an average aggregate delta notional of ~$3,300. In contrast to the dynamic (changing) delta of the call option, the delta of the shares has remained static (unchanging). The value of each share continues to increase to the same extent – axiomatically – that the price of each share increases, and the aggregate delta notional of the 30 shares has remained unchanged at $3,000. Said otherwise, the aggregate notional size of the 30 share position has remained unchanged at $3,000, and the aggregate notional size of the 100 call options' sensitivity to the share price has increased from $3,000 to $3,500.[108] The Investor will lose [Change in Share Price * # of Shares] = [($101-100)*30] = [$1*30] = $30 on the short share position. The Investor will gain [Change in Call Option Value * # of Call Options] = [($1.93 - $1.6)*100] = [$0.33*100] = $33 on the call options. Thus, the $33 gain on the call options offsets the $30 loss on the share price for a total gain of $3. The Investor will re-hedge their directional exposure by selling short an additional 5 shares.[109]

Conversely, if the non-local price move in the underlying shares is a decrease from $100 to $99, a net gain of $2 will be obtained. At a share price of $99.75, the delta of the call option is ~29.5%. At $99.5, the delta is ~28.5%. At $99.25, the delta is ~27.5%. When the share price reaches $99, the delta is ~26.5%, and the value of the call option is ~$1.32, representing a 28c decrease in the value of the call option relative to the $1 decrease in the value of the shares. The delta of each call option has dynamically changed from ~30% to ~26.5% for an average change of ~28%. The aggregate delta of the call options has changed from ~$3,000 to ~$2,650, at an average delta of ~$2,800. In contrast to the dynamic delta of the call option, the delta of the shares has remained static. The value of each share continues to decrease at the same extent – axiomatically – that the price of each share decreases, and the aggregate delta of the 30 shares has remained unchanged at $3,000. Said otherwise, the aggregate notional size of the 30 share position has remained unchanged at $3,000; the aggregate notional size of the 100 call options' sensitivity to the share price has decreased from $3,000 to $2,650.[110] The Investor will gain [Change in Share Price * # of Shares] = [$1 * 30] = $30 on the short share position. The Investor will lose [Change in Call Option Value * # of Call Options] = [($1.6 - $1.32)*100] = [$0.28*100] = $28.00 on the call options. Thus, the $30 gain on the short share position offsets the $28 loss on the call options for a total gain of $2. The investor will re-hedge their directional exposure by buying 3 or 4 shares to close out a portion of their short position.[111]

The primary reason to purchase call options is not to delay ownership of shares or to obtain leverage, as call options provide neither temporary bridge financing nor longer-term leverage materially different from

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[108] Now, if the share price increases in a small, "localized" amount by X%, the aggregate notional of the 100 share position will increase by $3,000*X%, and the aggregate notional of the call options' sensitivity to the share price will have increase by $3,500*X%.
[109] [35%-30%] * 100 = 5 shares.
[110] Now, if the share price increases in a small, "localized" amount by X%, the aggregate notional of the 100 share position will decreased by $3,000*X%, and the aggregate notional of the call options' sensitivity to the share price will have decreased by $2,650*X%.
[111] [30%-26.5%]*100 = 3.5 shares, which do not trade in fractional units.

available margin financing.[112] Rather, call options enable Investors to obtain a profit from options pricing parameters and/or exposure to "optionality." This could be understood as profiting from mispriced volatility: a mispriced probabilistic assumption of future price *outcome*, or a mispriced standard deviation and therefore mispriced likelihood of a large upward price *outcome* at expiry. Alternatively, this could be understood as profiting from mispriced gamma: a mispriced probabilistic assumption of future price *movement*, or a mispriced standard deviation and therefore mispriced likelihood of constant upward and downward price *movement* that can be captured through dynamic delta hedging. This could also be understood as profiting from mispriced delta, and the non-linear payout of options.

      As such, there is an incongruity between (1) the conferral of 13D beneficial ownership on call options – which confer a contractual option to acquire shares but are used primarily for optionality; and (2) the non-conferral of 13D beneficial ownership on cash-settled TRS – which confer a *de facto* option to acquire shares and are used primarily to either delay share acquisition, or obtain leverage or tax avoidance on a position that would in other forms be subject to 13D reporting. The relevance of this distinction between a delayed purchase of shares and a purchase of optionality, and its support for a conferral of 13D Beneficial Ownership on cash-settled TRS, is further explained by the hedging activity of an Investment Bank that has written an over-the-counter (OTC) call option to our Investor, in Section I

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[112] As above, options may provide a source of leverage for institutional investors who, by mandate, do not have access to leveraged financing (e.g. mutual funds, or long-only asset managers).

Appendix B. Physical v. Cash-Settlement of Options.

Importantly for the purposes of 13(d) beneficial ownership, profit could be obtained equally from either physically-settled or cash-settled call options. However, for single-stock options,[113] physical settlement terms prevail as a function of (1) market liquidity; and (2) the manner in which investment banks and most other entities[114] writing call options[115] hedge the directional exposure of those option.

Regarding (1) – market liquidity – exchange-traded options are physically settled, and therefore even bilateral OTC transactions between parties will contain physical settlement terms to improve liquidity through replicability. Regarding (2) – hedging treatment – in the event that, near expiry, the share price is significantly above the strike price of the call option, the delta of the call option will be 100%, and for every call option they are short, the option writer will own one equity share to hedge her directional exposure. Thus, at expiry, the short party to the call option – who has hedged her directional exposure over the life of the trade – will have ownership of the shares required for physical settlement upon the call option owner's exercise. Delivery of shares from the writer to the purchaser will not impact the market price of the underlying shares. If the owner of the call option has not hedged her own directional exposure, upon receipt she can elect to retain the shares or dispose of the shares over a timeline that enables her to minimize the impact to market price. Alternatively, if the owner of the call option has also hedged her directional exposure, she can use the shares received from the option writer at settlement to close out her short position and return shares equivalent to the amount borrowed to the equity lender.

However, if the option were cash-settled, the writer of the call option would need to sell all shares hedging their delta exposure at a price as close to the option settlement price as possible. This ensures that the writer does not lose money on the basis between where they sold the shares hedging their directional exposure and the settlement price that determines the payout to the owner of the call option. For example, if the final valuation of the call option is determined by the closing market price on a given day, the writer of the call option must try to sell the shares hedging their directional exposure at the market closing price on that day. For small amounts of shares, it would not be difficult to execute a sale at the market closing price. However, for a large amount of shares it would be difficult to execute a sale at the market closing price. Moreover, a large sale might negatively impact the market closing price by creating a supply imbalance, detracting from the ultimate profit of the option purchaser. If the share price is proximate to the call option strike price, such supply imbalance might even cause the share price at market close to drop below said strike price, causing the call option to expire worthless. Thus, the holder of a call option would likely elect for physical settlement, whether or not they desire to maintaining share ownership beyond expiry (or the time by which they are able to sell shares received without negatively impacting market supply/demand dynamics).

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[113] Index options are cash-settled.

[114] One notable exception would be funds executing a call-overwriting strategy, wherein additional income on one's shareholdings could be obtained by selling short-dated call options in periods of limited expected share appreciation.

[115] For the purposes of illustration, this paper examines bilateral OTC options transactions, to better illustrate long and short party hedging treatment. In practice, an investor might trade listed options and face the relevant exchange – the analysis, however, would remain the same.