Unplugging Heartbeat Trades and Reforming the Taxation of ETFs

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The much-touted tax efficiency of equity exchange traded funds (ETFs) has historically been built upon portfolios that track indices with low turnover and the tax exemption for in-kind distributions of appreciated property.

This rule permits ETFs to distribute appreciated shares tax-free to redeeming authorized participants (APs) and reduce a fund's future capital gains. ETFs and APs, working together, exploit this rule in so-called heartbeat trades in which an ETF distributes shares of a specific company or companies to a redeeming AP, instead of a pro rata basket of the ETF's portfolio. The distributed securities are appreciated shares of companies that are on the verge of being acquired in a taxable transaction or that are slated to be removed from the index tracked by the ETF. In the absence of heartbeat trades, the ETF would recognize gain from the sale of the shares.

Through everyday redemptions and heartbeat trades, equity ETFs are able to make tax-free portfolio adjustments and avoid generating capital gains until their shareholders sell their shares. The quasi-consumption tax treatment of ETFs is unwarranted and gives ETFs an unfair tax advantage over mutual funds, publicly traded partnerships, and direct investments by investors. Although these redemptions could be treated as taxable exchanges between the ETF and an AP under substance-over-form principles, given the vagaries of the tax common law, Congress should simply eliminate the exemption for in-kind redemptions. Congress could alternatively limit the exemption to redemptions consisting of a pro rata portion of an ETF's portfolio. Either alternative would limit tax-free portfolio adjustments and better align the taxable and economic gains of ETF shareholders.

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I. INTRODUCTION

Investment companies, including mutual funds and exchange traded funds (ETFs), play an ever-increasing role in U.S. financial markets. At the end of 2020, investment companies held total assets of \$29.7 trillion, with \$23.9 trillion (80%) invested in mutual funds and \$5.4 trillion (18%) in ETFs. These assets constituted

¹ INV. Co. INST., 2021 INVESTMENT COMPANY FACT BOOK 33 at II (61st ed. 2021) [hereinafter FACTBOOK], https://perma.cc/3ZLY-KZGX; *id.* at 41 fig. 2.2. Investment companies also include closed-end funds and unit investment trusts (UITs), which held about 0.9% and 0.2%, respectively, of investment company assets. *Id.* Many early ETFs were organized as UITs. Two of these early UITs, SPDR S&P 500 ETF Trust (SPY) and PowerShares QQQ Trust, Series 1 (QQQ), still represent a significant portion of total ETF trading volume and net assets. Exchange-Traded Funds, 83 Fed. Reg. 37332, 37336

23% of household financial assets² and represented 30% of U.S. issued equities, 23% of bonds issued by U.S. corporations, 15% of U.S. treasury and agency securities, and 29% of municipal securities.³

The growth over the last two decades in U.S. ETFs has been meteoric. In 1999, there were only thirty ETFs of a total of 18,926 investment companies; by 2020, there were 2,296 ETFs of a total 16,127 investment companies. ETF assets too have grown explosively from \$34 billion in 1999 (out of \$7.1 trillion total investment company assets) to \$5.5 trillion in 2020 (out of \$30 trillion total investment company assets).

This trend shows no signs of abating. Dimensional Fund Advisors, a large U.S. asset manager, announced in 2020 that it would begin to offer ETFs for the first time in its forty-year history. Other large mutual fund providers, including JPMorgan, have also begun to convert some of their mutual funds to ETFs.

Although ETFs and mutual funds are generally subject to the same regulatory and tax regimes,⁸ ETFs offer unique characteristics that have driven their explosive growth. Shares of an ETF can be traded throughout the day at a price close to the fund's net asset value (NAV). In contrast, an investor purchasing or redeeming shares of a mutual fund will pay or receive the closing NAV.⁹

(proposed Jul. 31, 2018). This article does not address UITs. For a history of the development of index funds, including ETFs, *see* ROBIN WIGGLESWORTH, TRILLIONS: HOW A BAND OF WALL STREET RENEGADES INVENTED THE INDEX FUND AND CHANGED FINANCE FOREVER (2021).

- ² FACTBOOK, supra note 1, at 43 fig. 2.4.
- ³ Id. at 47 fig. 2.7.
- 4 Id. at 40 fig. 2.1.
- ⁵ *Id.* at 41 fig. 2.2 (ETF assets); *id.* at 40 fig. 2.1 (number of ETFs). In contrast, the number of mutual funds grew from 7,970 to 9,027, and the assets held by mutual funds grew from \$6.8 billion to \$23.9 billion over the same period. *Id.* at 40 fig. 2.1 (number of mutual funds); *id.* at 41 fig. 2.2 (mutual fund assets).
- 6 Lewis Braham, $D\bar{F}A$'s Plan to Launch 3 ETFs Marks the End of an Era, BARRON'S (Oct. 2, 2020), https://perma.cc/3SY4-3G6P. The ETFs were converted from mutual funds.
- ⁷ See, e.g., Claire Ballentine, If Your Mutual Fund Becomes an ETF, Here's Why, BLOOMBERG (Apr. 1, 2021), https://perma.cc/FY68-DQ6M; Brian Cheung, 'Floodgates' open on mutual funds converting into ETFs, YAHOO FIN. (Aug. 13, 2021), https://perma.cc/3RTU-LKMB. Heather Bell, JP Morgan to Convert 4 Mutual Funds, ETF.COM (Aug. 11, 2021), https://perma.cc/RF6H-4F7M.
- ⁸ Investment companies are subject to the provisions of the Investment Company Act of 1940 [hereinafter the 1940 Act], and regulated investment companies are subject to the provisions of Subchapter M of the Internal Revenue Code. Certain ETFs, which invest in commodities, currencies, and futures, are not subject to the 1940 Act. As of 2021, these ETFs held assets of \$82 billion of the \$4.4 trillion total ETF assets. FACTBOOK, *supra* note 1, at 84 fig. 4.2.
- 9 A fund may not offer to exchange its securities for anything other than its NAV without SEC approval. 15 U.S.C. \$ 80a-11 (2021); 17 C.F.R. \$ 270-22c-1(a) (2021)

Intraday pricing facilitates the use of ETFs not only to gain exposure to diversified portfolios but also to engage in hedging transactions, to write and purchase options on them, and to take short and leveraged positions.

In 2019, the SEC finalized rules that facilitate the formation of new ETFs by exempting them from certain provisions of the Investment Company Act of 1940, especially the requirement to obtain an exemptive order prior to launch. It also issued an order approving actively traded ETFs, which will potentially allow ETFs to compete with actively managed mutual funds. It is clear that the future of public investment company growth belongs to ETFs.

For long-term taxable investors, another important advantage of ETFs over mutual funds is their much-touted tax efficiency, which is attributable to two factors. The first is that many large ETFs track indices in which turnover is low, such as the S&P 500 or the Russell 3000. Consequently, an ETF that holds the constituent components of an index should potentially realize taxable gains only in limited circumstances, such as when the index changes and the ETF sells appreciated shares or the appreciated shares of a portfolio company are acquired in a taxable transaction.

The more important driver of ETF tax efficiency is Section 852(b)(6), which exempts from tax in-kind distributions of appreciated securities paid to redeeming shareholders. In-kind redemptions, while rare for mutual funds, constitute the DNA of ETFs, as in-kind contributions and redemptions by authorized

(requiring redemption or purchase price to be at the current NAV which is next computed after the redemption or purchase request).

Exchange Traded Funds, 84 Fed. Reg. 57162, 57166 (Oct. 24, 2019) (codified at 17 C.F.R. pts. 210, 232, 239, 270, 274) [hereinafter Rule 6c-11].

Precidian ETFs Trust, Investment Company Act Release Nos. 33440, 84 Fed. Reg. 14690 (Apr. 8, 2019) (notice) and 33477 (May 20, 2019) (order) and related application. Prior to the Precidian order, ETFs disclosed daily their portfolio components. In contrast, the Precidian ActiveShares ETFs are not required to disclose their portfolio components. Precidian discloses portfolio prices every second.

¹² See, e.g., Rabih Moussawi, Ke Shen, and Raisa Velthuis, The Role of Taxes in the Rise of ETFs (Sept. 22, 2022) (working paper), https://perma.cc/5BSX-BUZA (concluding that migration of flows from active mutual funds to ETFs is driven primarily by tax considerations); Ben Johnson & Alex Bryan, Measuring ETFs' Tax Efficiency Versus Mutual Funds, MORNINGSTAR (Aug. 7, 2019), https://perma.cc/FPZ6-BVV8.

¹³ The committee that selects stocks comprising the S&P 500 typically replaces 25 to 30 companies per year or 5% or 6% of the index. David Blitzer, *Inside the S&P 500: Selecting Stocks*, S&P INDEXOLOGYBLOG (July 9, 2013), https://perma.cc/C8PY-WUEP. Other indices may have a slightly higher turnover. In contrast, many equity mutual funds have annual turnover exceeding 100%.

participants (APs) help to ensure that an ETF's share price closely tracks its NAV.

In an in-kind redemption, an ETF manager can distribute low basis securities and minimize the ETF's unrealized gains. Even if an ETF subsequently sells securities in its portfolio because of changes in the index or a taxable merger, these sales may not generate taxable gains if the securities held by the ETF have a high basis or the ETF has capital losses to offset any realized gains. Consequently, an ETF's taxable investors will not pay tax until they sell their shares.¹⁴

Since mutual funds rarely make in-kind distributions, they do not have the same opportunities as ETFs to dispose of low basis securities tax free. When a mutual fund sells shares to rebalance its portfolio or because it experiences net redemptions, such sales may generate capital gains and necessitate further distributions to avoid entity-level tax. All year-end shareholders will be taxed on their share of these gains regardless of whether the fund's taxable gains correspond to the shareholders' economic gains.

To avoid recognizing gains, a fund manager could sell high basis securities, but leaving low basis securities in the fund would increase the fund's unrealized gains or overhang for current and future shareholders. Mutual funds generally endeavor to avoid significant overhang, because unrealized gains may dissuade taxable investors from purchasing shares of the fund, since these new investors will be taxed on these past gains when they are realized.¹⁶

Primarily because of their tax efficiency,¹⁷ ETFs have exploded in popularity, and a significant tax wedge has been created between mutual funds, direct investments, and ETFs without explicit congressional consideration. In essence, many equity mutual funds that offer identical economic exposure as ETFs are now second-class tax citizens.

Even more concerning is that creative tax advisors have now begun to exploit Section 852(b)(6). The financial press has publicized certain structured trades, denominated "heartbeat

An ETF investor will be taxed on distributions received from an ETF attributable to dividends, short-term capital gains, or interest.

¹⁵ Capital gains dividends, which are dividends consisting of a fund's net capital gains, are generally distributed at year-end.

¹⁶ Ethan Yale, Mutual Fund Tax Overhang, 38 VA. TAX REV. 397 (2018).

 $^{^{17}}$ Moussawi et al., supra note 12.

trades,"¹⁸ in which an AP contributes securities to an ETF in exchange for new ETF shares and shortly thereafter—two days or so—redeems the same shares. Instead of satisfying the redemption request with the same basket of securities that would be contributed to create new ETFs shares, the ETF distributes only appreciated securities that are about to be acquired in a taxable transaction or will have to be sold because of a change in the underlying index tracked or strategy followed by the ETF.¹⁹

In promulgating Rule 6c-11 in 2019, the SEC specifically permitted ETFs to use "custom baskets," which include a basket of a non-representative selection of the ETF's portfolio holdings, in issuing or redeeming securities. This rule provides the securities law blessing for heartbeat trades²⁰ that permits ETFs to make tax-free portfolio adjustments, which neither mutual funds nor individual investors can do.

Another example of the exploitation of Section 852(b)(6) is Vanguard's launch of ETFs as a separate share class of some of their large mutual funds.²¹ The principal benefit of this capital structure scheme is that when an AP requests redemption of its ETF shares, the mutual fund distributes its securities to the redeeming AP. These distributions allow the mutual fund to eliminate unrealized gains from its portfolio and thereby benefit both its mutual fund and ETF shareholders.

Vanguard has further turbocharged this capital structure arbitrage by overlaying it with heartbeat trades. The financial press reported that the Vanguard funds used heartbeat trades in 2018 to distribute significantly appreciated shares of Monsanto that were on the verge of being acquired in a taxable transaction by

¹⁸ Elisabeth Kashner, The Heartbeat of ETF Tax Efficiency [hereinafter Heartbeat), FACTSET (Dec. 18, 2017), https://perma.cc/3EDP-7B3N; Elisabeth Kashner, The Heartbeat of ETF Tax Efficiency Part Two: Knowing the Players [hereinafter Players], FACTSET (March 22, 2018), https://perma.cc/5LCA-9NUL; Elisabeth Kashner, The Heartbeat of ETF Tax Efficiency Part Three: Trade Forensics, FACTSET (Apr. 5, 2018) https://perma.cc/VC5L-9MZ7; Zachary Mider, Rachel Evans, Carolina Wilson, and Christopher Cannon, The ETF Tax Dodge is Wall Street's 'Dirty Little Secret', BLOOMBERG (March 29, 2019), https://perma.cc/98C9-JHPE.

¹⁹ Sam Potter, *BlackRock ETFs Get Billions Via Trades Hinting at Tax Avoidance*, BLOOMBERG (Jun. 24, 2021), https://perma.cc/P6MZ-ULY8 (describing \$13.5 billion inflows into five funds in suspected heartbeat trades due to rebalancing of FTSE Russell indices).

 $^{^{20}}$ Rule 6c-11, 84 Fed. Reg. 57162, 57184–57189; 17 C.F.R. § 270.6c-11(a)(1) (defining custom basket). Custom baskets and heartbeat trades are discussed infra at Part VII.A. and R

 $^{^{21}}$ $\,$ $See\ infra$ at Part VII.D.

Bayer and thereby avoided recognizing billions of dollars of gains for its mutual fund and ETF shareholders.²²

Through a combination of the in-kind redemption rule of Section 852(b)(6) and heartbeat trades, many ETFs offer superior tax treatment to investing through an after-tax IRA: no tax until sale or disposition of the ETF shares, and any gains are taxed as long-term capital gains.²³ Although an individual investor who directly holds a portfolio of securities can obtain the same result, an ETF can make tax-free adjustments to its portfolio without triggering taxable gains, which an individual investor generally cannot do. ETFs offer a significant tax advantage over economically similar mutual funds, investment partnerships, and direct holdings of taxable investors. It is certain that creative tax advisers will continue to expand the use of Section 852(b)(6).

Under tax common law principles, heartbeat trades could be treated as taxable exchanges between an ETF and the participating AP. Given the vagaries of the tax common law and the breadth of the current statutory exemption for in-kind redemptions, there is authority to respect the separate treatment of the related contributions and redemptions. Furthermore, solely eliminating heartbeat trades—currently the most egregious tax pathology of ETFs—would still leave intact Section 852(b)(6), which allows ETFs to eliminate, tax free, unrealized gains and serves as a capital gains siphon for mutual funds with ETF share classes.

Congress should revise Subchapter M by eliminating tax-free heartbeat trades, preventing ETFs from siphoning capital gains from mutual funds, and preventing the loss of basis through in-kind redemptions. Although the tax exemption of Section 852(b)(6) has been in the Internal Revenue Code since 1969, this Article argues that Congress should reconsider the exemption for in-kind redemptions by either eliminating the rule or significantly narrowing the circumstances in which it applies. Given that the current regime violates fundamental norms of sound tax

²² Mider et al., supra note 18.

²³ Contributions to an after-tax IRA are not deductible, and hence must be made with after-tax dollars. Any realized earnings are exempt from current taxation, but withdrawals in excess of the amount contributed are treated as ordinary income. Thus, an investor in a tax-efficient ETF would currently recognize their share of the fund's ordinary dividends, but it would recognize long-term capital gains upon exiting the investment. Holding the same investment in an after-tax IRA, the investor would not be taxed currently on dividends but would recognize ordinary income upon withdrawing the investment gains. Furthermore, if the shares of the ETFs are held at death, the shareholder's heirs will receive them with a stepped-up basis, which eliminates any unrealized capital gains. IRAs are not eligible for a stepped basis at death.

policy and costs the Treasury significant revenue,²⁴ Sen. Wyden, chair of the Senate Finance Committee, proposed eliminating Section 852(b)(6) in September 2021.²⁵

The growth of ETFs coupled with the exploitation of Section 852(b)(6) has laid bare some major infirmities of Subchapter M. Given that Subchapter M is over 80 years old, Congress should reconsider the taxation of public investment companies and their shareholders and enact a regime that would aim to better equalize the tax treatment of individual investors, mutual funds, ETFs, and partnerships that invest in public securities.²⁶

II. AN OVERVIEW OF REGULATED INVESTMENT COMPANY TAXATION

Open-end mutual funds, closed-end funds, and ETFs constitute regulated investment companies (RICs)²⁷ subject to taxation

A preliminary estimate by the Joint Committee on Taxation is that repealing Section 852(b)(6) would raise \$206 billion over the next 10 years. Dawn Lim & Richard Rubin, Democratic Tax Proposal Takes Aim at ETFs, WALL St. J. (Sept. 15, 2021), https://perma.cc/EE4D-ZX83.

 $^{^{25}}$ Staff of S. Finance Comm., 117th Cong., Discussion Draft on Wyden Passthrough Reform, Section-by-Section Summary (Sept. 10, 2021), https://perma.cc/JTE5-GS2S.

²⁶ The taxation of U.S. investment companies has begun to attract the attention of legal scholars over the last decade due to the growth in ETF assets under management and the salience of the Section 852(b)(6) tax subsidy. See, e.g., Samuel D. Brunson, Mutual Funds, Fairness, and the Income Gap, 65 ALA. L. REV. 139, 160 (2013) (recommending that investors be able to exclude up to ten percent of their dividend income from mutual funds from the investors' taxable income); John C. Coates IV, Reforming the Taxation and Regulation of Mutual Funds: A Comparative Legal and Economic Analysis, 1 J. LEGAL ANALYSIS 591, 614-18 (2009) (discussing a wide array of mutual fund reforms); Jeffrey M. Colon, The Great ETF Tax Swindle: The Taxation of In-kind Redemptions, 122 PENN ST. L. REV. 1 (2017); Steven Z. Hodaszy, Tax-Efficient Structure or Tax Shelter? Curbing ETFs' Use of Section 852(b)(6) for Tax Avoidance, 70 TAX LAW. 537, 599-605 (2017) [hereinafter Hodaszy, Section 852(b)(6) Tax Shelter (arguing that ETFs should be required to reduce the basis of their remaining securities by the unrecognized gain of distributed securities) and Steven Hodaszy, ETFs Use Section 852(b)(6) for Tax Avoidance, Not Just Tax Deferral: So Why is this Loophole Still Open, 75 TAX LAW. 489 (2022) [hereinafter Hodaszy, Section 852(b)(6) Loophole] (same); Lee A. Sheppard, ETFs as Tax Shelters, 130 TAX NOTES 1235, 1240 (2011) (critiquing § 852(b)(6)) and Lee A. Sheppard, ETFs as Tax Dialysis Machines, 165 TAX NOTES FEDERAL 909 (Nov. 11, 2019); Shawn P. Travis, The Accelerated and Uneconomic Bearing of Tax Burdens by Mutual Fund Shareholders, 55 TAX LAW. 819, 853-57 (2002) (detailing scenarios under which Subchapter M can result in acceleration of tax for fund shareholders and arguing that fund shareholders should not be taxed on reinvested capital gains but only when shares are sold, or non-capital gain dividends are received).

The 1940 Act regulates "investment companies." 15 U.S.C. § 80a-3(a)(1) (defining investment company to mean any issuer that holds itself out as being engaged primarily in the business of investing or trading in securities). The investment companies that are subject to the provisions of the 1940 Act are face-amount certificate companies, unit investment trusts, and management companies. 15 U.S.C. § 80a-4(1)-(3). To elect to be a RIC, a company must be a U.S. corporation that is registered under the 1940 Act as a

under Subchapter M, provided they satisfy certain income and asset tests.²⁸ A mutual fund continually offers to sell or repurchase its shares at net asset value (NAV).²⁹ A closed-end fund does not issue redeemable securities but instead generally raises capital in a public offering, and its shares are then purchased or sold at market price.³⁰ An ETF is an open-end fund that issues and redeems its shares only with certain APs in exchange for a basket of securities, and its shares are listed on a national securities exchange and purchased or sold at market price.³¹

Although a RIC must generally be a U.S. corporation, Subchapter M modifies the U.S. corporate double tax regime by permitting a RIC to deduct dividends paid against its investment company income and net capital gain dividends paid against its net capital gain.³² These deductions generally ensure that a RIC's investment company income and net capital gains are taxable only at the shareholder level.³³

management company, which includes open-end funds and closed-end funds. 15 U.S.C. § 5(a)(1)–(2). Unit investment trusts, business development companies, and certain common trust funds also can qualify as RICs, but they are not discussed further in this Article. I.R.C. § 851(a)(1) and (2).

To be a RIC, an investment company elects RIC status and must derive at least 90% of its gross income as passive income, e.g., dividends, interest, and gains from the sale of stock or securities, and satisfy certain asset diversification requirements. I.R.C. § 851(b)(2) (defining gross income test); id. § 851(b)(3) (defining diversification test). The 1940 Act also imposes diversification tests on investment companies. 15 U.S.C. § 80a-5(b)(1)–(2). An investment company that fails either the income or asset tests may still qualify as a RIC if it makes certain disclosures and undertakes steps to remediate the failure. I.R.C. § 851(d)(3) (failure to satisfy asset tests) and 851(i) (failure to satisfy gross income test).

An open-end mutual fund is one that issues "redeemable securities," which entitle the holder to receive from the issuer his proportionate share of the issuer's current net assets, or the cash equivalent thereof. 15 U.S.C. §§ 80a-2(a)(32) and 80a-5(a)(1) (defining redeemable security and open-end company, respectively).

³⁰ 15 U.S.C. § 80a-5(a)(2) (defining closed-end company to be any management company that is not an open-end company). A closed-end fund can also raise capital via rights offerings and distribute capital via tender offers.

³¹ 17 C.F.R. § 270.6c-11(a)(1) (defining ETF). If certain conditions are satisfied, an ETF will be deemed to issue "redeemable securities" under Section 2(a)(32) of the 1940 Act. 17 C.F.R. § 270.6c-11(b)(1). ETFs organized as UITs do not fall within the purview of Rule 6c-11 but operate pursuant to exemptive orders.

32 I.R.C. § 852(b)(1) and (3)(A) (imposition of corporate tax on investment company taxable income and net capital gains over capital gain dividends); I.R.C. § 852(b)(2)(D) (deduction for dividends paid against investment company income excluding net capital gains and tax-exempt interest dividends). Investment company taxable income is regular corporate taxable income but with certain adjustments, such as the exclusion of net capital gain, the disallowance of a deduction for any net operating loss (NOL), and the disallowance of the dividends received deduction. *Id.* § 852(b)(2). Investment company taxable income does not include tax-exempt interest.

33 To the extent that a RIC does not distribute or is not deemed to distribute its investment company income or its net capital gains, it will be subject to corporate tax.

Subchapter M implements many aspects of a pass-through tax regime: the deduction for dividends paid eliminates tax at the entity level, and RIC shareholders get look-through treatment for their share of a RIC's net capital gain, tax-exempt interest, and qualified dividends.³⁴ This tax treatment is similar to that of partnerships and S corporations. A RIC can also pass through foreign tax credits to its shareholders if the RIC invests in foreign securities and earns mostly foreign source income.³⁵

Subchapter M does not fully reflect pass-through tax principles. For instance, a RIC's short-term capital gains are taxed as ordinary dividends.³⁶ In calculating investment company income, a RIC can fully deduct net investment expenses, whereas if the RIC were organized as a partnership or the shareholder directly incurred such expenses, these expenses would probably not be deductible.³⁷ Finally, losses are not passed through to fund shareholders; instead, the losses remain at the RIC level where they can be used to offset future fund-level gains.³⁸

Subchapter M thus reflects both separate-entity and passthrough tax principles.³⁹ The failure of Subchapter M to implement certain pass-through features of Subchapter K can result in

Furthermore, to retain the benefits of Subchapter M, a RIC is generally required to distribute or be deemed to distribute annually at least 90% of its investment company taxable income and 90% of its tax-exempt interest income, computed without regard to the deduction for dividends. I.R.C. \$852(a)(1)(A)-(B). If a RIC does not satisfy the distribution requirements, it will be taxed as a regular C corporation.

- ³⁴ I.R.C. § 854(b)(1)(B) (qualified dividends); *id.* § 854(a) (treating capital gain dividend not as dividend for purposes of Sections 1(h)(11) and 243); *id.* § 852(b)(3)(B) (treating capital gain dividend as long-term capital gain); *id.* § 852(b)(5)(B) (treating exempt-interest dividend as tax-exempt interest under Section 103).
 - ³⁵ See id. § 853(a)(1).
- When short-term capital gains are distributed to foreign shareholders, however, they retain their character as capital gains. See id. § 871(k)(2)(D) (exempting foreign persons from tax on short-term capital gain dividends distributed by a RIC). See Jeffrey M. Colon, Foreign Investors in U.S. Mutual Funds: The Trouble with Treaties, 35 VA. TAX REV. 483 (2016).
- 37 I.R.C. § 66(a)(1). These investment expenses also do not offset favorably taxed net capital gains or qualified dividend income. See Rev. Rul. 2005-31, 2005-1 C.B. 1084. For individuals, prior to 2018, such expenses would have been deductible under Section 212, but subject to the two percent floor for miscellaneous itemized deductions of Section 67(a). Under Section 68(g), which prohibits any miscellaneous itemized deduction until post-2025 taxable years, none of these expenses are deductible.
- ³⁸ A RIC can indefinitely carry over a capital loss. I.R.C. § 1212(a)(3)(A). Net operating losses, in contrast, cannot be carried over to reduce a RIC's income in a subsequent year. *Id.* § 852(b)(2)(B). But since a loss reduces a fund's NAV, it also reduces a shareholder's gain or increases loss upon a sale of the RIC shares. *Id.* § 852(b)(2)(B).
- Other separate entity tax principles reflected in Subchapter M include taxing RICs on their retained income and gains at corporate rates, taxing shareholders on contributions of property to RICs, treating RICs as corporations for reorganizations and contributions, and requiring RICs to maintain earnings and profits accounts for retained earnings.

temporary over- or under-taxation of RIC shareholders and drive a wedge between a shareholder's economic gains and losses and her taxable gains and losses. This occurs because Subchapter M does not permit a RIC to adjust the basis of its assets for gains and losses recognized by a departing shareholder or to allocate taxable gains and losses to the shareholders who have economically benefited from these gains or borne the losses rather than to the shareholders who receive distributions.

III. SUBCHAPTER M'S FAILURE TO MATCH TAXABLE AND ECONOMIC INCOME AND LOSS

A RIC's NAV is the fair market value (FMV) of its net assets (assets minus liabilities) divided by the number of outstanding shares. It reflects both the basis of a RIC's assets, including realized but undistributed income and gains, and its unrealized gains and losses. A mutual fund shareholder purchases or redeems shares of a fund at the fund's NAV, which becomes the shareholder's basis in the fund shares in the case of a purchase and amount realized in the case of a sale.⁴⁰ For ETFs and closed-end funds, a seller or purchaser of shares receives or pays the market price of its shares, which may deviate from the fund's NAV.

Although Subchapter M provides look-through treatment for certain items of investment company income, it mandates separate entity treatment for transactions in dealings in RIC shares. Consequently, a selling or redeeming shareholder recognizes gain or loss based on the difference between the shareholder's basis in the sold or redeemed shares and the amount realized;⁴¹ the gain

⁴⁰ An open-end fund may not offer to exchange its securities for anything other than its NAV without SEC approval. 15 U.S.C. § 80a-11; 17 C.F.R. § 270-22c-1(a) (requiring redemption or purchase price to be at the current NAV which is next computed after the redemption or purchase request).

Since stock of an investment company is generally a capital asset, any gain or loss recognized on the sale or exchange of the stock will be capital, and the seller's holding period will generally determine whether it is short-term or long-term. Redemptions of shares of publicly offered RICs are treated as sales or exchanges. I.R.C. § 302(b)(5).

If a shareholder has received an actual or deemed capital gains distribution and holds the RIC share for six months or less, any loss recognized on the sale or exchange is long-term loss to the extent of the capital gain dividend. I.R.C. § 852(b)(4)(A). This rule prevents a shareholder from purchasing a share shortly before a capital gain distribution and then selling it and realizing a short-term loss. Since a fund's NAV declines by the amount of the distribution, the long-term capital gain distribution would approximate the short-term capital loss if the shares were sold shortly after the distribution. For taxable investors in the highest tax brackets, the loss would offset income taxed at 40.3%, while the long-term gain would be taxed at 23.8%. A similar rule disallows any loss on the sale of stock of a RIC held six months or less to the extent of any tax-exempt interest dividend. I.R.C. § 852(b)(4)(B).

or loss recognized by a selling or redeeming shareholder does not affect the inside basis of the RIC's assets.⁴² When a shareholder purchases shares of a mutual fund, the fund's inside basis increases by the amount of the purchase price. However, the purchase of shares from another shareholder, e.g., in the case of an ETF, does not affect the inside basis of the ETF's assets.

The separate entity treatment of dealings in RIC shares, especially mutual funds, can lead to the temporary over- or undertaxation of RIC taxable shareholders, which is illustrated in the following examples.

Example 1: Buying into Tax Overhang

A mutual fund has one shareholder, S1, and one share outstanding. S1's basis is \$10, the fund's NAV is \$30, and the fund has \$20 of unrealized gain or tax overhang. All this appreciation accrued while S1 held the share and is reflected in the difference between S1's basis and the fund's NAV. S2 purchases a share for \$30, the fund's NAV. Immediately after S2 becomes a shareholder, the fund sells its appreciated assets and recognizes \$20 of gain, which will be distributed and taxed \$10 each to S1 and S2, provided both remain shareholders when the gain is distributed.

By purchasing shares at NAV, S2 also purchases his share of the tax overhang—\$10 (50% of \$20).⁴³ Upon the fund's sale of the appreciated assets and distributions of the gains, S1 is taxed on only \$10 of the \$20 economic gain that accrued while he held his share, while S2 is taxed on \$10 of the fund's economic gain, none of which accrued while he held his share.

After distribution of \$10 to each S1 and S2, the fund's NAV drops to \$20,44 but S1's basis remains at \$10 and S2's at \$30. Thus, S1 has shifted \$10 of tax on his economic gain to S2. The overtaxation of S2 will be remedied when S2 redeems his share, and S1 will be taxed on his remaining \$10 of economic gain when he redeems his share.

⁴² One exception is if a RIC does not distribute all of its capital gains, in which case it is taxed on undistributed net capital gains. I.R.C. § 852(b)(3)(A). The RIC may designate an amount of undistributed capital gains, and the RIC's shareholders at year end will include that amount in income. They are treated as having paid their share of the RIC's taxes and can increase their share basis by the difference between the designated amount and tax paid. I.R.C. § 852(b)(3)(D).

⁴³ For a detailed examination of tax overhang, see Yale, *supra* note 16.

 $^{^{44}~}$ NAV was \$30 (\$60 assets/two shares) when S2 invested. After distribution of the \$20 of realized gains, the NAV drops to \$20 (\$60 - \$20)/two shares.

The shifting of the tax from S1 to S2 on the fund's economic gains occurs because Subchapter M does not have a mechanism to allocate the taxable gains of a fund to the shareholders who have economically earned those gains or to adjust the basis of fund assets by gains recognized by redeeming shareholders. The fund's taxable gains are simply taxed to the shareholders who own shares when the fund distributes those gains, regardless of whether those shareholders have benefitted economically from those gains. This also occurs when a shareholder purchases shares of a fund that has realized gains but not yet distributed them to shareholders.

Example 2: Buying into Realized Gains

A mutual fund has one shareholder, S1, and one share outstanding. S1's basis is \$10, the fund's NAV is \$30, and the fund has \$20 of realized but undistributed gains. S2 purchases a share for \$30, the fund's NAV. Immediately after S2 becomes a shareholder, S1 redeems his share for \$30 and recognizes \$20 of gain. Assuming the fund does not realize any additional gains or losses, at year end, S2 will receive and be taxed on \$20 of realized gain, all of which arose before S2 became a shareholder.

S2 economically paid for the realized gains when she purchased the fund share at NAV. The receipt of the \$20 of realized gains is merely a return of S2's invested capital and not a distribution of a return on S2's invested capital. Upon distribution of the \$20, the fund's NAV drops to \$10, but S2's share basis remains at \$30. S2 has been temporarily overtaxed by \$20, which will not be remedied until S2 redeems her share.

Like in Example 1, S2 is overtaxed in Example 2 because Subchapter M does not have a mechanism to allocate the taxable gains of a fund to the shareholders who have economically earned those gains—S1 in Example 2—or to adjust the basis of fund assets by gains recognized by a redeeming shareholder—the \$20 recognized by S1 in Example 2.

Subchapter M's failure to adjust a fund's basis in its assets for losses recognized by a redeeming shareholder permits fundlevel losses to be temporarily used twice.

Example 3: Doubling Up on Losses

A mutual fund has one shareholder, S1, and one share outstanding. S1's basis is \$30, the fund's NAV is \$10, and the

fund has \$20 of unrealized loss. All this depreciation accrued while S1 held the share and is reflected in the difference between S1's basis and the fund's NAV. S2 purchases a share for \$10, the fund's NAV. Immediately after S2 becomes a shareholder, S1 redeems his share for \$10, and recognizes a \$20 loss.

The fund's unrealized built-in loss, which lowered the fund's NAV and was responsible for S1's tax loss when he redeemed, can offset \$20 of future realized fund-level gains when the loss is realized. For instance, assume that the fund immediately sells the assets after S2 invests for \$10 and recognizes a loss of \$20. If the fund invests the \$10 in assets that subsequently appreciate to \$30 and are sold for a gain of \$20, the realized loss can offset the realized gain. S2 will not have any taxable income even though he has \$20 of economic gain and will recognize this gain only when he redeems his shares. The same \$20 of loss is thus used temporarily twice, once by S1 and once by S2.

The financial press has become more attentive to the negative consequences of buying shares of funds with realized gains and regularly cautions investors to be wary of investing in funds that are expected to make significant year-end capital gains distributions. ⁴⁵ Many fund families also publish capital gains estimates prior to the record date so that current and potential shareholders can appropriately plan for capital gain distributions. ⁴⁶

The issue of tax overhang (defined as *unrealized* gains) has been the subject of many studies by financial economists⁴⁷ and has begun to be addressed in the legal literature.⁴⁸ Financial researchers have found that overhang can reduce future new investment

⁴⁵ See, e.g., Debbie Carlson, Brace Yourself for a Large Tax Hit from Mutual-Fund Payouts, MarketWatch (Dec. 13, 2021), https://perma.cc/DG5L-F5A9; Tom Herman, A Tax Trap Many Fund Investors Fall Into, Wall St. J. (Oct. 22, 2019), https://perma.cc/W3BX-BETZ; and Christine Benz, The Lowdown on Mutual Fund Capital Gains 2019 Edition, Morningstar (Nov. 14, 2019), https://perma.cc/W4NB-TKU3. Even the funds of sponsors that have a reputation for focusing on tax efficiency, such as Vanguard, can generate significant tax liabilities in the absence of economic gains. See Jason Zweig, The Huge Tax Bills That Came Out of Nowhere at Vanguard, Wall St. J. (Jan. 21, 2022), https://perma.cc/8KMH-ERES (noting that certain Vanguard target date funds reported distributing 15% of total assets as capital gains).

 $^{^{46}}$ $\,$ See, e.g., Distributions by Fidelity Mutual Funds, FIDELITY, https://perma.cc/TP92-XBT8

⁴⁷ See, e.g., Michael Barclay, Neil D. Pearson, and Michael S. Weisbach, Open End Mutual Funds and Capital Gains Taxes, 49 J. of Fin. Econ. 3 (1998) (finding evidence that managers reduce overhang to attract new investors); Daniel Bergstresser & James Poterba, Do After-Tax Returns Affect Mutual Fund Inflows, 63 J. of Fin. Econ. 381 (2002).

⁴⁸ Yale, supra note 16.

inflows from tax-aware investors.⁴⁹ Since managers are generally compensated based on assets under management (AUM), and reduced fund inflows affect their compensation, managers attempt to reduce overhang by strategically realizing gains and losses.⁵⁰

The issue of managers reducing overhang potentially creates a double conflict between managers and tax-exempt shareholders, and between taxable and tax-exempt shareholders. If managers incur trading costs solely to reduce overhang, these trades do not create any alpha for the fund, but instead generate costs that are borne by all shareholders. These trades, however, can benefit both managers and taxable shareholders: taxable shareholders benefit by reduced overhang, and managers benefit by increased AUM. Tax-exempt shareholders, including shareholders who hold fund shares through 401(k) plans, 403(b) plans, and IRAs, would probably never want a manager to execute trades that only provide tax benefits for taxable shareholders and no expected economic benefits for tax-exempt shareholders.

Given that co-investment by taxable and tax-exempt share-holders is ubiquitous, these conflicts are inevitable. The explosive growth in the assets held in tax-exempt accounts has resulted in many funds having more AUM of tax-exempt shareholders than taxable shareholders.⁵³ The potential conflict between taxable and tax-exempt shareholders may now be a more pressing concern for taxable investors as managers of funds with a high percentage of tax-exempt investors appear to adjust their investment strategies and generate higher annual tax burdens than funds with a lower percentage of tax-exempt investors.⁵⁴ Since it appears that the percentage of tax-exempt investors in investment companies will continue to grow, because investment companies are the predominant investment option in qualified retirement

 $^{^{49}~}$ Bergstresser and Poterba found that an increase of 10% in a fund's overhang decreased new money net inflows by between 1.7% and 2.3%. Bergstresser & Poterba, supra note 47, at 406 tbl. 10.

⁵⁰ Barclay, et al., *supra* note 47, at 30, 33.

⁵¹ For a discussion of the issue of co-investment by taxable and tax-exempt shareholders in mutual funds, see Jeffrey M. Colon, *Oil and Water: Mixing Taxable and Tax-Exempt Shareholders in Mutual Funds*, 45 LOY. U. CHI. L. J. 773 (2014).

 $^{^{52}\,}$ Barclay, et al., supra note 47, at 30, 33. Tax-exempt shareholders may benefit, however, if any increased AUM reduces per-share administrative costs.

 $^{^{53}\,}$ Clemens Sialm & Laura Starks, Mutual Fund Tax Clienteles, 67 J. Fin. 1397 (2012).

⁵⁴ Id.

plans, mutual fund managers may become less attentive to the tax concerns of taxable investors.⁵⁵

Subchapter M has certain structural shortcomings that can drive a wedge between the economic and taxable income of fund shareholders. The failure of Subchapter M to adjust the basis of fund assets by gain or loss realized by departing shareholders can leave too much or too little fund-level gain for remaining shareholders. The absence of a mechanism in Subchapter M to allocate built-in gain, built-in losses, or realized gains to existing shareholders can lead to new shareholders being taxed on the economic gains, or benefitting from the economic losses, of historic shareholders. These structural deficiencies result in the temporary over- or undertaxation of taxable mutual fund shareholders and may cause managers to undertake uneconomic trades to mitigate these structural limitations.

These problems present significant challenges for taxable investors in mutual funds. The explosion of ETFs over the last two decades has been driven by their enhanced tax efficiency, which has largely eliminated the issue of overhang in practice for their shareholders. At the same time, it has introduced a significant distortion between the tax burdens borne by individual investors, ETF shareholders, and mutual fund shareholders.

IV. THE RISE OF EXCHANGE TRADED FUNDS

The most important development for public investment companies in the last thirty years is the invention of the ETF.⁵⁶ The explosive growth in the AUM of ETFs has been driven by the increased demand of market participants for passive investment strategies, greater portfolio transparency of ETFs, real-time

be the property of the standard funds to sell appreciated assets to pay the redeeming shareholders. The sales generated significant tax liabilities for taxable shareholders. See Zweig, supra note 45.

The first ETF was listed in Canada. See David Berman, The Canadian Investment Idea that Busted a Mutual-fund Monopoly, The Globe and Mail (Feb 19, 2017), https://perma.cc/KG3S-TH6R. The first U.S. ETF, the Standard & Poor's Depository Receipts or SPDRs, was approved by the SEC in 1993. See Frances Denmark, Happy 20th Birthday, ETFs: A Look Back at Nate Most and His Novel Idea, INSTITUTIONAL INVESTOR (July 3, 2013), https://perma.cc/A3TU-BWUZ and The ETF Story Podcast, Bloomberg (2018), https://perma.cc/3X4U-L2VB. See also WIGGLESWORTH, supra note 1 at 166–83 (detailing the birth of SPDRs).

liquidity of ETF shares, low fees, and greater tax efficiency of ETFs.⁵⁷

Recognizing that the growth in the AUM of ETFs required a more accommodating and flexible regulatory regime, the SEC, in 2019, adopted new Rule 6c-11. This rule permits ETFs to operate without the delay and expense of requesting exemptive relief from certain provisions of the 1940 Act, which ETFs had been required to do.⁵⁸ In particular, ETFs that come within the scope of Rule 6c-11⁵⁹ will be considered to issue "redeemable securities" under Section 2(a)(32) of the 1940 Act, and ETFs will be regulated as openend funds.⁶⁰ These changes will undoubtedly foster new growth in ETFs.

The primary force motiving the growth of ETFs is the overall shift from active management to passive management. In 2019, the AUM of passive U.S. equity funds surpassed that of active U.S. funds.⁶¹ The passive benchmarks include not only the traditional equity or fixed income benchmarks, such as the S&P 500, DJIA, and Russell 3000, but also portfolios of companies selected

⁵⁷ See, e.g., Martin Small et al., Four Big Trends to Drive ETF Growth, BLACKROCK (May 2018), https://perma.cc/8DZ2-RZUJ.

⁵⁸ Rule 6c-11, *supra* note 10, at 37, 333–37, 334. An ETF would typically request exemptive relief under Sections 2(a)(32), 5(a)(1), 22(d) and (e), 12(d)(1), 17(a) and (b), and 6(c) of the 1940 Act. *See*, *e.g.*, Cambria Inv. Mgmt., L.P., Investment Company Act Release No. 30302 (Dec. 12, 2012). *See also* DAVID J. ABNER, THE ETF HANDBOOK 287 (2nd ed. 2016). In connection with Rule 6c-11, the SEC also adopted amendments requiring enhanced disclosures both to the SEC and to the public.

⁵⁹ Some of the conditions to come within the scope of Rule 6c-11 include that the ETF be listed on a national securities exchange, issue and redeem creation units from APs, disclose on its public website details of the portfolio holdings forming the basis of the NAV calculation, disseminate an intraday indicative value, and comply with other website disclosures and recordkeeping requirements. 17 C.F.R. § 270.6c-11(c). Leveraged ETFs were specifically excluded from the application of new Rule 6c-11.

Act, which generally requires that investment companies, principal underwriters and dealers sell a redeemable security to the public at the current public offering price. ETFs are also exempted from Rule 22c-1, which requires that a dealer transact a redeemable security at its NAV. Rule 6c-11 also exempts certain affiliates of an ETF from the application of Section 17(a) of the 1940 Act, which prohibits an affiliated person of an investment company from selling any security or other property to or purchasing any security from the investment company. This rule applies to persons who are affiliates solely because they hold voting power of 5% or more of the ETF's shares or 5% or more of any investment company that is an affiliated person of the ETF. 17 C.F.R. § 270.6c-11(b)(3)(i) and (ii).

General John Gittelson, End of Era: Passive Equity Funds Surpass Active in Epic Shift, Bloomberg (Sept. 11, 2019), https://perma.cc/QL5H-RMWL. On January 21, 2020, for example, three of the four ETFs with AUM of greater than \$100 billion tracked the S&P 500 and the fourth tracked the U.S. total market index, which tracks the CRSP U.S. Total Market Index. See ETF Finder, ETF.COM, https://perma.cc/FR4V-FA8L (visited October 10, 2022) (ETFs selected by AUM).

for certain characteristics, such as ESG,⁶² minimum volatility,⁶³ cannabis,⁶⁴ and even pet care.⁶⁵

ETFs combine some features of closed-end and mutual funds but mitigate some of the shortcomings of both. Like closed-end funds, retail ETF investors purchase and sell ETF shares through a broker on an exchange and not from the fund itself. Since ETF shares can be purchased or sold throughout the trading day, an ETF investor does not purchase or sell at the end-of-day NAV as in the case of mutual funds.

The price at which an ETF trades is set by the market, and an investor may sell or purchase at a price different from NAV. A well-known shortcoming of closed-end funds is that fund shares can trade at varying premiums or discounts to NAV, which at times can be significant.⁶⁶ This prevents closed-end funds from being useful in certain trading strategies⁶⁷ and may also raise questions as to whether they are suitable investments in ERISA accounts.

Since ETFs are exchange traded, they can be used both in long and short strategies. For instance, if one believes that healthcare stocks would do better than the overall market, one could go long on the iShares U.S. Healthcare ETF and short the SPDR S&P 500 Index. In contrast, it is not generally possible to

 $^{^{62}~}$ See, e.g., iShares ESG MSCI U.S.A. ETF (ESGU ticker), iShares By BlackRock, https://perma.cc/4YSW-E4YM (tracking an index of U.S. companies selected and weighted for positive environmental, social, and governance characteristics).

⁶³ See, e.g., iShares Edge MSCI Min Vol U.S.A. Small-Cap ETF (SMMV ticker), ISHARES BY BLACKROCK, https://perma.cc/R4EE-ETXJ (tracking an index of U.S.-listed small cap stocks that are selected and weighted to create a low-volatility portfolio).

⁶⁴ See, e.g., The Cannabis ETF (THCX ticker), MARKETWATCH, https://perma.cc/2ZQ7-CEAX (tracking an index of cannabis companies defined as companies deriving at least 50% of their revenues from legal marijuana or hemp industries).

⁶⁵ See, e.g., ProShares Pet Care ETF (PAWZ ticker), MARKETWATCH, https://perma.cc/LA34-8CPQ (tracking a global index of companies providing pet-care products and services). ETFs offer hundreds of different economic exposures to subsets of the global equity market. See List of Equity Indexes, VETTAFI, https://perma.cc/C4EW-PU7M. The use of the term "passive" for many of these funds is certainly a misnomer. See, e.g., Adriana Z. Robertson, Passive in Name Only: Delegated Management and "Index" Investing, 36 YALE J. ON REG. 795 (2019) (arguing that index investing is a form of delegated management).

This is a very well-known phenomenon of closed-end funds. See, e.g., Charles M. C. Lee, Andrei Shleifer, and Richard Thaler, Investor Sentiment and the Closed-End Fund Puzzle, 46 J. OF FIN. 75 (1991); Martin Cherkes, Closed-End Funds: A Survey, 4 ANN. REV. OF FIN. ECON. 431 (2012).

⁶⁷ For example, an investor who believes that the Korean stock market was going to rise could purchase shares of a closed-end fund that invests in Korean stocks. Even if the Korean stock market rises, the investment in the fund could earn a return less than the increase in the Korean stock market if the fund trades at a discount or the discount widens.

short mutual funds, and the discounts and premiums in closedend funds also preclude them from being good candidates for shorting strategies.

The structural innovation of ETFs to overcome the discounts and premiums to NAV of closed-end funds is the role of APs, which are large broker-dealers, such as Merrill Lynch, Morgan Stanley, and Goldman Sachs, authorized by the ETF to create and redeem shares in large baskets denominated "creation units." ETF shares can generally only be created and redeemed by APs.⁶⁸ To purchase ETF shares, an AP contributes the appropriate basket of securities to the ETF⁶⁹ in exchange for shares, which the AP can then sell to retail investors. An AP redeems ETF shares by presenting a sufficient number of shares to the ETF in order to constitute a creation unit and then receiving a specified portfolio of securities from the ETF. The cost of redemption and purchase of creation units is borne by the AP.⁷⁰

The creation and redemption process helps to ensure that the market price of an ETF share does not vary substantially from the ETF's NAV.⁷¹ For instance, if the NAV of an ETF is \$10 and the share price is \$9, the AP can short the underlying ETF portfolio for \$10, purchase ETF shares on the open market for \$9, and request redemption of the ETF shares in exchange for the ETF's underlying basket of securities worth \$10 per share. The securities can be used to close the short sale, which generates a profit of \$1 for the AP.⁷² The increased demand for the ETF shares will increase the ETF share price and eventually eliminate the discrepancy between the NAV and market price.

Similarly, if an ETF's NAV is \$9 and the ETF share price is \$10, an AP can short the ETF shares for \$10, purchase the

Rule 6c-11 permits non-APs to create and redeem shares on the day of a reorganization, merger, conversion, or liquidation. 17 C.F.R. § 270-6c-11(a)(2) (2019).

⁶⁹ For a more detailed overview of the creation and redemption process, see *ETF Processing*, DTCC LEARNING CENTER, https://perma.cc/58DC-YKVW. In-kind creations and redemptions are by far the predominant methods, although some ETFs require cash to create shares, and some pay cash instead of in-kind distributions upon redemption. *See* SPDR Series Trust, Form 497K, 91–92 (Dec. 18, 2019) (listing creation unit sizes from 10,000 to 500,000 shares for various ETFs and describing whether a fund's creation units are in-kind or cash). For an overview of the purchase and redemption of creation units of a particular family of funds, *see id.* at 91–98.

 $^{^{70}}$ See, e.g., SPDR Series Trust, Form 497K, 91–92 (Dec. 18, 2019) at 97–98 (listing transaction fees for the purchase and redemption of creation units, which range from \$250 to \$3,000 per transaction).

⁷¹ See, e.g., Understanding the ETF creation and redemption mechanism, CHARLES SCHWAB (2022), https://perma.cc/3WAP-GSS3.

 $^{^{72}}$ $\,$ Id. The AP earns virtually risk-free the \$1 difference between the short sale proceeds and the acquisition cost of the ETF shares.

underlying basket of securities of the ETF for \$9, and then create additional ETF shares that can be used to close the short sale, thereby generating a profit of \$1.73 The increased supply of ETF shares will cause the ETF price to decline and eventually eliminate the AP's arbitrage profits and the discrepancy between the NAV and market price.

The creation and redemption process gives ETFs certain structural advantages over mutual funds. Since APs pay a fee to create and redeem ETF shares, these costs are shifted from the ETF and its shareholders to the APs and indirectly to the purchasing ETF shareholders. Although the purchasing or selling ETF shareholder bears bid-ask spreads and brokerage fees, many ETFs can now be purchased with no commissions.⁷⁴ But since ETFs must be purchased and sold on an exchange, there is no assurance that an ETF shareholder will be able to purchase or sell exactly at or near the fund's NAV.⁷⁵

When a mutual fund shareholder invests or requests redemption of its shares, any creation and redemption costs are borne by all remaining mutual fund shareholders. These costs include record-keeping, and transaction costs from sales and purchases of assets. Mutual fund shares can generally be purchased and redeemed without any fees, ⁷⁶ but many mutual funds have

⁷³ *Id*

The Some fund families, such Vanguard and Fidelity, offer commission-free ETFs for persons with a brokerage account. See, e.g., ETF fees and minimums, VANGUARD, https://perma.cc/BE7J-JJ7C (no commission for Vanguard ETFs if purchased in Vanguard brokerage account) and iShares ETFs, FIDELITY, https://perma.cc/XMV9-7GEL (no commissions for iShares ETFs if purchased in Fidelity brokerage account). Although these arrangements eliminate brokerage commissions, the investor still bears any bid-asked spread.

The ETFs are required to post online a table showing the number of days during the most recently completed calendar year and the most recently completed calendar quarters the ETF traded at a premium or discount. ETFs are also required to post a line graph showing the actual premiums and discounts. 17 C.F.R. § 270.6c-11(c)(1)(ii) and (iii). In situations of market stress, bid-asked spreads can widen, and the ETF share price can diverge significantly from NAV. For example, on April 9, 2020, the iShares iBoxx \$ High Yield Corporate Bond ETF traded at a premium of 4.59%; on March 26, 2020, the premium was 3.25%. See iShares iBoxx \$ High Yield Corporate Bond ETF, ISHARES BY BLACKROCK, https://perma.cc/27LK-UHVC. If there is insufficient interest in the ETF, it can become a so-called "zombie" fund, which are generally characterized by low AUM and trading volume. See, e.g., Guillaume Poulin-Goyer, Understanding Zombie ETFs, INVESTMENT EXECUTIVE (Feb. 4, 2020), https://perma.cc/P4T2-F4W8 (describing zombie ETFs as funds 'living dead' due to their low trading volume and low assets).

Although a mutual fund can levy a front-end or back-end load on purchasing and selling shareholders, such loads are increasingly rare.

minimum purchase requirements for new shareholders, whereas a shareholder can purchase as little as one share of an ETF.⁷⁷

When a mutual fund experiences net redemptions—redemptions greater than contributions—the fund can be forced to sell assets to obtain cash to pay redeeming shareholders. 78 Such sales generate trading costs and, more importantly, potential tax liabilities for the remaining shareholders if the securities sold are appreciated.

Unlike mutual funds, ETFs do not have to sell shares to satisfy redemption requests. Rather, ETFs distribute securities in kind. Although the economic effect of selling publicly traded securities and distributing the cash to a redeeming shareholder is identical to distributing those same securities to a redeeming shareholder, a sale of securities is a taxable event for the fund, but an in-kind distribution is tax-free under Section 852(b)(6). Through in-kind redemptions, ETF managers can distribute, tax free, low-basis shares and thereby reduce overhang and future fund-level taxable gains.

V. THE ORIGINS OF SECTION 852(b)(6)

Section 852(b)(6) now functions as an enormous tax subsidy for the ETF industry. The was not enacted after any deliberative congressional consideration to stimulate the formation of ETFs or to correct market failures of closed-end or mutual funds, but was enacted in 1969—twenty-four years before the first ETF—to give

For example, the largest mutual fund in the United States is the Vanguard 500 Index Fund Admiral Shares (VFIAX ticker) which requires a minimum investment of \$3,000, whereas the ETF of the same fund has a minimum investment of one share. See VFIAX Vanguard 500 Index Fund Admiral Shares, VANGUARD (OCT. 10, 2022), https://perma.cc/S757-34ZE. After the initial investment in a fund with a minimum investment requirement, subsequent investments can be of any size.

The contributions equal or exceed redemptions, contribution proceeds can be used to pay the redeeming shareholders. Mutual funds often retain a cash balance with which to satisfy redemptions, but these cash balances can be a drag on fund returns. ETFs do not have to retain such balances, because they generally satisfy redemption requests in-kind. If not all of the underlying assets are liquid, which can occur especially in a bond mutual fund, a run on the fund can cause the fund to first sell the liquid assets to meet redemptions leaving only illiquid and difficult-to-sell assets in the fund. A notable example of this occurred in 2015 when Third Avenue Focused Credit Fund suspended redemptions. See, e.g., Matt Hougan, ETFs Solve Mutual Bond Fund Problem, ETF.COM (Dec. 14, 2015), https://perma.cc/FXE7-NVY6.

⁷⁹ Section 852(b)(6) is listed as a tax expenditure, but one for which projected revenue changes are unavailable. STAFF OF JOINT COMM. ON TAX'N, 116TH CONG., ESTIMATES OF FEDERAL TAX EXPENDITURES FOR FISCAL YEARS 2020–2024, JCX-23-20, at 22 (Joint Comm. Print 2020). The Joint Committee of Taxation, however, has estimated that repeal of Section 852(b)(6) would bring in over \$200 billion in tax revenue over the next 10 years. Lim & Rubin, supra note 24.

relief to mutual funds if they had to make in-kind distributions in rare moments of financial distress. This tiny speck of a provision has become one of the primary engines of ETF growth.

When Congress enacted the predecessor to Subchapter M in the Revenue Act of 1942, it subjected RICs to corporate tax, but because of the deductions for dividends paid, a RIC avoided corporate tax by distributing its gains and income as dividends. Congress did not need to specifically address the treatment of in-kind distributions of property in redemptions because under the *General Utilities* doctrine such distributions were not taxable. This treatment was codified in the Internal Revenue Code of 1954 for both ordinary distributions, including redemptions, and liquidating distributions. Including redemptions, and liquidating distributions.

In 1969 Congress began to carve back the *General Utilities* doctrine with the enactment of former Section 311(d)(1), which required a corporation to recognize gain on the distribution of appreciated property to a shareholder in redemption of its shares. The legislative history to former Section 311(d)(1) is sparse. The genesis of former Section 311(d)(1) was an article in Forbes that described how some insurance companies were buying back their shares using appreciated stock in their investment portfolios without recognizing gain on the distributed shares. This article apparently caught the attention of Congress, as this strategy was

⁸⁰ Gen. Utils. & Operating Co. v. Helvering, 296 U.S. 200, 206 (1935). Congress extended the same non-recognition rule in the case of liquidations. I.R.C. §§ 336(a), 337(a) (1954) (corporation does not recognize gain or loss on the distribution of property in liquidation or the sale of property within a twelve-month period of adoption of liquidation). Notwithstanding the general non-recognition rules, gain was required to be recognized on the distribution of LIFO inventory and property with liabilities greater than basis, and on the distribution of installment obligations in liquidations. *Id.* §§ 311(b)–(c), 336. The *General Utilities* doctrine, originally codified in Section 311(a) of the Internal Revenue Code of 1954, remains in the Code, but it no longer applies to distributions of appreciated property. 26 U.S.C. § 311(b).

⁸¹ I.R.C. § 311(a)(2) (1954) (corporation does not recognize gain or loss on distribution of property in ordinary distribution or redemption); *id.* at §§ 336(a), 337(a) (1954) (corporation does not recognize gain or loss on the distribution of property in liquidation or the sale of property within 12-month period of adoption of liquidation).

 $^{^{82}}$ Tax Reform Act of 1969, Pub. L. No. 91-172, sec. 905(a), § 311(d)(1), 83 Stat. 487, 713 (amended in 1986).

Solution Clifford L. Porter, Redemption of Stock with Appreciated Property: Section 311(d), 24 Tax Law. 63, 63–64 (1970). The article was The Great Tax-Free Cash-In: The Insurance Companies Are Getting imaginative about the Big Unrealized Capital Gains in Their Investment Portfolios, Forbes, Nov. 1, 1969, at 52. In 1968, the IRS ruled that a corporation would not recognize gain on the distribution of appreciated shares held as investment property in redemption of its shares. The stock was offered pro rata to all shareholders, and shareholders owning 35% of the distributing corporation's stock accepted the offer.

specifically mentioned in the Senate report accompanying the legislation.⁸⁴

The legislative history noted Congress's concern with avoiding tax on the distribution of appreciated property by a corporation in redemption of its shares, but it is puzzling why Congress did not make all transfers of appreciated property out of corporate solution taxable. This provision applied to both redemptions that were treated as ordinary distributions and sales or exchanges, but notably, it did not apply to ordinary distributions such as dividends or to distributions in complete or partial liquidations.⁸⁵ After the 1969 legislation, it was still possible for a corporation to distribute appreciated property tax free in an ordinary distribution, such as a dividend, and in a complete liquidation.

In the same legislation, but without any discussion in the legislative history, Congress exempted RICs from the gain recognition requirement if the distribution was "... in redemption of its stock upon the demand of the shareholder."86 Since closed-end funds generally do not redeem their shares upon the demand of their shareholders, this provision was limited to open-end mutual funds.87 One contemporary commentator had suggested that the goal of the exclusion was probably to "minimize the tax on regulated investment companies on the theory that they are but conduits."88 Consequently, a mutual fund could continue to distribute appreciated property tax-free to its shareholders in redemption of their shares.

Although Congress may have been concerned in 1969 that taxing in-kind distributions could have subjected RICs to double taxation,⁸⁹ it is likely that in-kind distributions by mutual funds, although permitted under the 1940 Act,⁹⁰ were probably rare in

⁸⁴ S. REP. No. 91-552 at 279 (1969).

⁸⁵ H. R. REP. No. 91-782 at 333 (1969). Certain redemptions were excluded, including complete redemptions of 10%-or-more shareholders, split-offs of 50%-or-more subsidiaries, distributions pursuant to antitrust decrees, redemptions under Section 303, and certain redemption distributions to private foundations. Tax Reform Act of 1969, Pub. L. No. 91-172, sec. 905(a), § 311(d)(2)(A)–(G), 83 Stat. at 714.

⁸⁶ Tax Reform Act of 1969, Pub. L. No. 91-172, sec. 905(a), § 311(d)(2)(G), 83 Stat. at 714

 $^{^{87}}$ The IRS has permitted closed-end funds to redeem their shares subject to certain more restrictive circumstances than mutual funds. See infra Part X.C.

⁸⁸ See Porter, supra note 83, at 79.

⁸⁹ See Porter, supra note 83, at 79. This observation may not be entirely accurate, because even if distributions were taxable, the recognized gains would not be subject to entity-level tax, provided the RIC distributed the gains as a dividend.

⁹⁰ Under the 1940 Act, open-end funds issue "redeemable securities," which are defined to be a security "under the terms of which the holder, upon its presentation to the issuer . . . is entitled . . . to receive approximately his proportionate share of the issuer's

1969, and Congress may not have considered the issue important. It is clear that in 1969 Congress did not intend to completely repeal *General Utilities*, since a corporation could still distribute tax free appreciated property as an ordinary distribution and in a complete liquidation. The tax policy rationale for treating a distribution of appreciated property in a redemption as equivalent to a sale of the property followed by a distribution of the cash, however, applies equally to redemptions, ordinary distributions, and liquidating distributions.

In the Tax Reform Act of 1986, Congress finally eliminated any remaining vestiges of the *General Utilities* doctrine by requiring a corporation to recognize gain on the distribution of appreciated property in an ordinary distribution, redemption, or complete liquidation. But the repeal of *General Utilities* did not cover RICs, and in the same legislation, former Section 311(d)(1)(G) was simply moved from Subchapter C to Subchapter M and renumbered as Section 852(b)(6). The legislative history is silent on why RICs continued to be exempt, but it seems likely that in 1986, in-kind distributions by open-end mutual funds were rare. S

current net assets, or the cash equivalent thereof." 15 U.S.C. § 80a-2(a)(32). Details on a fund's right to pay redemptions in-kind are disclosed in Form N-1A, Item 11(c)(8) and a fund's formation documents, *e.g.*, articles of incorporation or declaration of trust. N-1A Items 22 and 23 also address redemption rights. Form N-1A is used by open-end funds to register under the 1940 Act and offer their shares under the Securities Act of 1933.

⁹¹ I.R.C. § 311(b) (distribution of appreciated property as an ordinary distribution taxable); *id.* at § 336(a) (distribution of appreciated property in a complete liquidation taxable). Section 311(b) applies to distributions described in Sections 301–07, which includes ordinary distributions (generally treated as dividends) under Section 301 and distributions in redemption of a corporation's shares that are treated as exchanges under Section 302(a). An important exception to this rule is Section 355, which permits a corporation to distribute stock or securities of a controlled corporation to its shareholders in a spin-off, split-up, or split-off without the recognition of gain or loss. I.R.C. § 355(c). Another exception is for property distributed to an 80%-or-more corporate shareholder in a corporate liquidation. *Id.* § 337(a).

 $^{^{92}}$ Compare I.R.C. § 311(d)(2)(E) (1982) (amended 1986), with Tax Reform Act of 1986, Pub. L. 99-514, sec. 631(e)(11), § 852(b), 100 Stat. 2085, 2274 (codified as amended at I.R.C. § 852(b)(6)).

⁹³ In promulgating rules for investment companies to manage their liquidity risks in 2016, the SEC stated that "most funds often consider redemptions in kind to be a last resort or emergency measure." Investment Company Liquidity Risk Management Programs, 81 Fed. Reg. 82142, 82210 (Nov. 18, 2016) (codified at 17 C.F.R. pts. 270, 274) [hereinafter SEC Liquidity Management].

VI. THE MUTUAL FUND RELIEF VALVE OF SECTION 852(b)(6) BECOMES THE ETF TAX BONANZA

One justification that has been put forth by regulators is that the in-kind redemption rule functions as a sort of relief valve that protects a fund from having to sell assets at "fire sale" prices when faced with significant redemptions. ⁹⁴ Here the focus may not be that such sales would generate taxable gains that could in turn require additional sales of assets, but that forced sales of assets at low prices could harm remaining shareholders. For instance, if a fund were forced to sell assets, it may choose to sell its most liquid assets and leave less liquid assets in the fund. This issue is discussed below in Part X.B.

To assure smaller investors that they will not receive in-kind distributions, most mutual funds have committed to pay certain redeeming shareholders in cash. Under Rule 18f-1, originally adopted in 1971, an open-end fund may elect to commit to pay all redemption requests in cash limited to the lesser of \$250,000 or 1% of the NAV of the fund for each shareholder during any ninety-day period. Since many mutual funds make this election, in-kind distributions potentially occur only in the case of significant redemptions. For ETFs, however, in-kind redemptions are in their DNA as they are one side of the mechanism by which a fund's market price is brought in line with its NAV.

When assets are contributed to an ETF, the APs will almost always recognize gain or loss, because the APs will not be in control of the ETF,⁹⁷ and when securities are distributed in redemptions, the ETF will not recognize gain or loss.⁹⁸ This arrangement gives an ETF manager valuable tax options. First, the manager can sell securities with built-in losses to recognize the losses,

⁹⁴ Michael S. Piwowar, Comm'r, SEC, Remarks at the 2015 Mutual Funds and Investment Management Conference (Mar. 16, 2015). See also SEC Liquidity Management, supra note 93.

⁹⁵ 17 C.F.R. § 270.18f-1(a) (2017). The irrevocable election is filed on Form N-18F-1 and must be disclosed in either the prospectus or statement of additional information. It is also required to be disclosed on Form N-1A, Item 23(d).

 $^{^{96}~}$ See Vikas Agarwal, Honglin Ren, Ke Shen, and Haibei Zhao, Redemption in Kind and Mutual Fund Liquidity Management, REV. OF FIN. STUD. (forthcoming) (finding that from 1997 to 2017, approximately 70% of funds permitted in-kind redemptions).

⁹⁷ To contribute appreciated property tax free to a corporation, the transferor(s) must be in control of the corporation immediately after the exchange. I.R.C. § 351(a). Control is defined to be at least 80% of the combined voting power of all classes of voting stock. I.R.C. § 368(c).

⁹⁸ I.R.C. § 852(b)(6) (Section 311(b), which requires a corporation to recognize gain on the distribution of appreciated property, does not apply to a RIC in a redemption of its shares).

which can then be used to offset future recognized fund level gains, and the manager can distribute securities with built-in gains tax free when they want to avoid recognizing gains. 99 In addition, given the ability to specifically identify shares that are distributed, a manager can distribute low-basis securities, the gain on which is exempt from tax under Section 852(b)(6). 100 These options give ETFs the best of both tax worlds: an ETF manager can adjust tax free the inside basis of the ETF's portfolio so that it consists of high-basis securities, which reduces overhang, and the manager can recognize fund-level losses that can be carried forward indefinitely and used to offset future fund-level taxable gains. 101

The combination of the managerial realization and specific identification options coupled with the exemption of Section 852(b)(6) has resulted in equity ETFs distributing virtually no capital gains dividends over the last decade despite record economic gains *and* significant portfolio adjustments. ¹⁰² For instance, from January 2011 through January 2020, the S&P 500 returned 13.22% per year for a total return of 205.67%. ¹⁰³ From 2015 through 2020, 155 companies were added to the S&P 500 and 152 were deleted. ¹⁰⁴

Equity ETFs and mutual funds typically distribute ordinary dividends, which consist of a fund's investment income after expenses, such as dividends, short-term capital gains, interest, and securities lending fees. To the extent that the dividends received

 $^{^{99}\,\,}$ The ETF could only recognize the losses if they were not subject to the wash sales limitation of Section 1091.

 $^{^{100}}$ Treas. Reg. § 1.1012-1(c) (default rule for basis of stock sold is FIFO, but specific identification permitted).

¹⁰¹ For example, at the end of March 31, 2021, the iShares Russell Mid-Cap ETF had \$1.132 billion of capital loss carryforwards and \$9.944 billion of unrealized gains, BLACKROCK, ISHARES 2021 ANNUAL REPORT 127 (2021), and it realized \$1.354 billion of gains from in-kind distributions, *id.* at 105. It is not clear why a RIC cannot use an NOL but can carryover a capital loss. I.R.C. § 852(b)(2)(B) (stating that no NOL deduction is permitted in computing investment company taxable income).

The largest and oldest ETF, SPDR S&P 500 ETF, has never made a capital gains distribution in 24 years. Zachary Mider, Rachel Evans, Carolina Wilson, and Tom Langerman, Hop In, Hop Out, Make Taxes Disappear, BLOOMBERG BUSINESSWEEK, Apr. 1, 2019, at 26. 27.

¹⁰³ The returns were obtained using an S&P 500 Return Calculator using starting month and ending month of January, starting year of 2011, and ending year of 2020. The returns were with dividends reinvested. See S&P 500 Return Calculator, with Dividend Reinvestment, DQYDJ, https://perma.cc/J5RT-8WAR.

 $^{^{104}}$ Eighty of the companies were removed because of mergers and acquisitions. *List of S&P 500 Companies*, WIKIPEDIA (Oct. 4, 2022), https://perma.cc/LG8F-YXDA; *see also* Adriana Z. Robertson, *The (Mis)Uses of the S&P 500*, 2 U. CHI. BUS. L. REV. 137, 160–63, 64 (finding that constituents of S&P 500 "change substantially over time").

by a fund are qualified dividends, the fund shareholders may treat the corresponding portion as qualified dividends.¹⁰⁵ Equity mutual funds typically generate some short-term capital gains, which are taxed as ordinary income in the hands of shareholders, but the ETFs in Annex 1 have none. Again, the difference arises not because of investment decisions by the managers, but because ETFs avoid short-term gains by using the exemption of Section 852(b)(6).

The quantum of the tax benefits of Section 852(b)(6) is easily observed in the fund-level disclosure of a fund's taxable gains and the realized but not recognized gains on in-kind distributions. A fund's statement of operations breaks out the realized gain and losses, including those arising from in-kind redemptions. The annual reports also provide a fund's built-in gains and losses. These reports demonstrate that the tax benefits of Section 852(b)(6) are staggering.

Annex 1 lists the largest (by AUM) twenty-five equity ETFs as of August 15, 2021, from etf.com. These twenty-five funds realized \$208 billion of gains from in-kind redemptions for the most recently ended fiscal year, but they distributed \$0 of capital gains.

Even while distributing \$817 billion via in-kind redemptions, these funds still had cumulatively \$1.25 trillion of unrealized gains. It seems that significant positive returns across U.S. equity markets prevented most of the funds from being able to use Section 852(b)(6) to eliminate fund-level built-in gains, although five funds had net built-in losses. The funds with built-in losses realized \$48 billion of gains in in-kind redemptions, which is about 25% of the total realized gains from in-kind redemptions of the twenty-five funds.

Many mutual funds that followed comparable investment strategies to these ETFs, but that could not avail themselves of the benefits of Section 852(b)(6), had significant taxable capital gain distributions. Consequently, the after-tax returns to the taxable mutual fund shareholders were less than the after-tax returns to the taxable ETF shareholders.

It is unquestionable that Section 852(b)(6) has imbued ETFs with a significant tax advantage over mutual funds. According to

¹⁰⁵ I.R.C. § 854(b)(1)(B) (qualified dividends). The fund shareholder must also satisfy the holding period rules in Section 246(c) to treat any dividend as a qualified dividend. I.R.C. § 1(h)(11)(B)(iii) (dividend is qualified dividend only if holding period rules of Section 246(c) are satisfied, with 45 days replaced by 60 days and 91-day period replaced by 121-day period). Qualified dividends are dividends received from U.S. corporations and certain foreign corporations. I.R.C. § 1(h)(11)(B)(i).

one academic study covering the period from 1993–2017, ETFs distribute annually only 0.1% of capital gains compared to 3.44% for active mutual funds and 1.76% for index mutual funds. The difference between capital gains distributions of passive ETFs and mutual funds is even greater for particular investment categories. For the fifteen-year period ending on December 31, 2018, the difference for midcap blend, midcap value, and small cap blend was 3.52%, 3.46%, and 4.21%. The difference for midcap blend was 3.52%, 3.46%, and 4.21%.

These differences arise even for funds with the same sponsor. For example, the investment advisor Blackrock offers the ETF iShares Russell 1000 ETF (fund ticker "IWB") and the mutual fund iShares Russell 1000 Large-Cap Indx Inv A (fund ticker "BRGAX", Class K), both of which aim to replicate the return of the Russell 1000 index. 108

The following table shows that the annual pre-tax returns ending in 2020 of both funds were virtually identical, with most of the difference being attributable to the difference in expense ratios of seven basis points (0.15% for IWB and 0.08% for BRGAX). 109 During each year, however, BRGAX, Class K, distributed long-term capital gains, short-term capital gains, and ordinary income dividends, whereas IWB only distributed ordinary dividends.

| Annual Returns (%) | | | | | |
|-----------------------|-------|-------|-------|-------|-------|
| | 2016 | 2017 | 2018 | 2019 | 2020 |
| BRGAX (K Class) | 11.92 | 21.60 | -4.85 | 31.28 | 20.84 |
| IWB | 11.91 | 21.52 | -4.91 | 31.26 | 20.8 |
| BRGAX (K Class) - IWB | 0.01 | 0.08 | 0.06 | 0.02 | 0.04 |

The difference in the recognized gains was mostly likely due to portfolio changes or gains realized to pay redeeming shareholders. Since both IWB and BRGAX track the same index, they must adjust their portfolios when the index changes. In 2018, 2019, and 2020, the Russell 1000 added fifty-five, forty-seven, and fifty-four companies and deleted thirty-six, twenty-one, and forty-three companies, respectively, from the index, which in turn required

¹⁰⁶ Moussawi, supra note 12, at 4, 5.

¹⁰⁷ Ben Johnson and Alex Bryan, *Measuring ETFs' Tax Efficiency Versus Mutual Funds*, MORNINGSTAR (Aug. 7, 2019), https://perma.cc/JL4E-E659.

 $^{^{108}}$ The Russell 1000 tracks the returns of the highest ranking 1,000 stocks, on a capitalization-weighted basis, of the Russell 3000, which aims to track the return of the entire U.S. stock market. FTSE RUSSELL, 2019 RUSSELL US INDEXES RECONSTITUTION 4 (2019), https://perma.cc/D2LC-HQ49.

 $^{^{109}}$ The difference between the two returns were, in four of the five years, actually a bit less than the difference in the expense ratios.

portfolio changes by BRGAX and IWB.¹¹⁰ When a mutual fund makes portfolio adjustments, the fund must generally sell the securities in a taxable transaction, and if the shares are appreciated, the fund will recognize gain.¹¹¹ When an ETF tracks an index that changes, the ETF must also adjust its portfolio, but the tax cost may be significantly less because of the in-kind redemption process, which helps reduce an ETF's built-in gains. Because of the realization option, if the securities have built-in losses, the manager can sell them and use the losses to offset any realized gains.¹¹²

But how can an ETF that holds appreciated assets and must make portfolio adjustments do so without recognizing gain? For instance, Annex 1 shows that of the top twenty-five equity ETFs, twenty had net built-in gains. Possible explanations are that the portfolio changes were only of securities whose net built-in losses were greater than the net built-in gains, or that the ETF had sufficient capital loss carryovers to offset any realized gains. If, however, the adjustments arose because companies were acquired in taxable acquisitions, such acquisitions typically result in premiums for target shareholders, and the ETF would have to recognize such gains, unless the fund had sufficient capital loss carryovers.

The most likely explanation is that ETF fund managers are relying on heartbeat trades, a mechanism that exploits Section 852(b)(6) to ensure that portfolio adjustments, whether arising from mergers, index changes, or a manager's decision to alter the portfolio, can be done without the recognition of gain. Heartbeat trades have become a tax pathology built on Section 852(b)(6).

 $^{^{110}\,}$ FSTE Russell, $2019\,Russell\,US\,Indexes\,Reconstitution,$ 4, https://perma.cc/KW8KV6M4. Additions generally are not taxable events.

¹¹¹ If shares are depreciated, the fund can generally recognize any losses, subject to the wash sales limitation of Section 1091. These losses can be netted against gains in determining a fund's net capital gains and investment income. If a fund has a net capital loss, it can be carried over indefinitely and used against gains in subsequent years, subject to certain limitations. I.R.C. § 1212(a)(3).

 $^{^{112}}$ As of March 31, 2021, IWB had \$613 million of capital loss carryovers compared to net assets of \$27 billion.

 $^{^{113}}$ Annex 1 shows that 100% of the top 25 equity ETFs had capital loss carryovers, and the total capital loss carryovers were \$133 billion.

VII. EXPLOITING SECTION 852(b)(6): HEARTBEAT TRADES AND CAPITAL STRUCTURE ARBITRAGE

A. Heartbeat Trades

Imagine that you own a diversified portfolio of shares of ten different companies worth \$10 million, and one of the companies, whose shares are significantly appreciated and worth \$1 million, is on the verge of being acquired in a taxable transaction. Shortly before the acquisition closes, a bank offers to exchange the \$1 million of appreciated shares of the target company in your portfolio for \$1 million of additional shares of the remaining nine companies in your portfolio in the same proportion as your portfolio. Immediately after the exchange, you would be in the same position as if you had received \$1 million of cash from the acquisition of the appreciated shares and reinvested proportionately the \$1 million in additional shares of the remaining nine companies in your portfolio.

For an individual investor, this exchange would clearly be a taxable exchange under Section 1001, because the appreciated shares are being exchanged for non-like-kind assets—the shares of the remaining companies in the portfolio.¹¹⁴ Not so for ETFs and APs, which engage in these exchanges in the guise of so-called heartbeat trades. Using the exemption of Section 852(b)(6) along with custom portfolios, these trades enable ETFs to avoid taxable gains even on appreciated shares that are on the verge of being acquired or disposed of in otherwise taxable transactions.¹¹⁵

The term "heartbeat trade" was coined by financial journalist Elizabeth Kashner in a series of articles published in 2017 and 2018.¹¹⁶ The heartbeat trades were further detailed in an article in Bloomberg Businessweek in 2019.¹¹⁷ The moniker "heartbeat" arose because when a fund's daily fund flows of contributions and redemptions are graphed, there are significant inflows that are followed shortly after by virtually identical outflows. The resulting graphs appear like those observed in an EKG monitor: most

 $^{^{114}}$ I.R.C. $\$ 1001(c) (generally requiring realized gain and loss on the sale or exchange of property to be recognized); Treas. Reg. $\$ 1.1001-1(a) (gain or loss is realized from the exchange of property for other property differing materially).

¹¹⁵ For detailed analysis of how Vanguard used heartbeat trades to eliminate the gain on \$1 billion of shares of Monsanto on the eve of its taxable acquisition by Bayer, see Zachary R. Mider, Annie Massa, and Christopher Cannon, Vanguard Patented a Way to Avoid Taxes on Mutual Funds, BLOOMBERG (May 1, 2019), https://perma.cc/9G8N-ESYV.

¹¹⁶ Kashner, supra note 18.

 $^{^{117}}$ Mider, supra note 102, at 26.

of an ETF's daily inflows and outflows do not vary too much, but there are significant spikes that resemble a patient's heartbeat.¹¹⁸

There are various scenarios for which a fund might employ heartbeat trades. For instance, a fund may need to dispose of appreciated securities because a portfolio company may be on the verge of being acquired in a taxable transaction, the constituent shares of a fund's tracking index could be slated to change, or a particular strategy followed by the fund, such as momentum, minimum volatility, value, or size, requires periodic readjustment or rebalancing of its portfolio. These types of trades are referred to as rebalancing trades. It has shares that are going to be acquired in a taxable acquisition or deleted from an index or fund portfolio are appreciated, a sale of the shares would generate taxable gains for the fund and its shareholders.

If shares in an ETF's portfolio have declined or the ETF has had significant inflows and outflows and has been able to distribute appreciated assets, the ETF may not hold significantly appreciated assets. If, however, the market has appreciated and the ETF has not experienced significant inflows and outflows, the ETF may own significantly appreciated assets. As shown in Annex 1, even with the ability to distribute tax free appreciated securities using Section 852(b)(6), twenty of the top twenty-five equity ETFs still hold significantly appreciated assets. 121

To avoid taxable gains when making portfolio changes, the ETF works with APs to structure related inflow and outflow trades to remove the appreciated securities from the fund tax-free via in-kind redemptions. ¹²² Before the date on which the portfolio will change (the rebalancing date), an AP contributes creation or custom baskets in exchange for ETF shares equal in value to the appreciated securities that the fund wishes to dispose of.

 $^{^{118}}$ A procedure to detect heartbeat trades based on inflows and outflows is set out in Moussawi, supra note 12, at 47.

¹¹⁹ The S&P 500 index, for example, is generally rebalanced quarterly and reconstituted annually in September. See S&P DOW JONES INDICES, S&P U.S. INDICES METHODOLOGY 26 (Mar. 2020); see also BlackRock ETFs Get Billions Via Trades Hinting at Tax Avoidance, BLOOMBERG (June 24, 2021), https://perma.cc/T82K-7FAY.

 $^{^{120}}$ A rebalancing of an equity index can consist of adding entirely new shares, increasing positions in current shares, deleting entire positions in current shares, and reducing positions in current shares.

 $^{^{121}}$ The twenty funds had built-in gains of \$1.271 trillion. The remaining five funds had total built-in losses of only \$20.5 billion.

 $^{^{122}}$ See Kashner, Players, supra note 18 (finding that creation and redemption trades come from "ETF trading desks at capital market firms."). Kashner also notes that although an asset manager or sponsor could invest in one of its portfolio managers and do the same trade, it is prohibited from doing so under the self-dealing rules of Section 17 of the 1940 $^{\rm Act}$

Immediately after the contributions, the fund's AUM increases by the value of the contributed securities. A short time later, usually two days, the AP redeems the ETF shares created in the inflow leg and receives a custom basket consisting solely or largely of the appreciated shares the fund wishes to delete from its portfolio. 123

If these two nominally separate transactions are respected for tax purposes, the distributions of the unwanted securities would be tax-free under Section 852(b)(6), and the fund would have been able to make tax-free fund-level portfolio adjustments. 124 After the redemption leg, the fund is roughly in the same position as if it had sold the unwanted shares for cash and then reinvested the cash proceeds in additional shares of the remaining securities of the ETF. An actual sale and reinvestment, however, would have been taxable.

B. Custom Baskets

The ability to carry out heartbeat trades is dependent on the ETF being able to distribute a non-pro rata selection of its portfolio in redemption of its shares. In promulgating Rule 6c-11 in 2019, the SEC specifically permitted ETFs to distribute securities via a custom basket, which is defined to be "a basket that is composed of a non-representative selection of the [ETF's] portfolio holdings." A contribution of a non-representative selection of the ETF's portfolio holdings in exchange for ETF shares also constitutes a custom basket.

Prior to 2012, the SEC did not impose limitations on the use of custom baskets by ETFs, but in 2012, the exemptive orders on which ETFs relied generally required that ETF redemption

¹²³ See Kashner, Heartbeat, supra note 18 If some of the shares that the ETF wishes to dispose of have built-in losses, the ETF could sell those in the market to generate fund-level losses to use against future gains.

¹²⁴ The AP would recognize any gain or loss on the contribution of the creation portfolio, as the transaction would not qualify under Section 351. The AP would recognize gain or loss on the difference between the value of the ETF shares at the time of contribution and the value of the securities received in the in-kind distribution. I.R.C. § 1001(c) (generally requiring realized gain and loss on the sale or exchange of property to be recognized); Treas. Reg. § 1.1001-1(a) (gain or loss is realized from the exchange of property for other property differing materially). The exchange of the ETF shares for the custom portfolio would be treated as a sale or exchange under Section 302(a)(5). I.R.C. § 302(a)(5) (redemption by publicly offered RIC treated as sale or exchange). An ETF would satisfy the definition of publicly offered RIC since its shares are regularly traded on an established securities market. I.R.C. § 67(c)(2)(B)(i)(II).

 $^{^{125}}$ 17 C.F.R. § 270-6c-11(a)(1)(A) (2019). A basket consists of the securities or other asset for which an ETF issues creation units (shares) or for which it redeems creation units. Id.

¹²⁶ Id.

baskets be a pro rata slice of an ETF's portfolio holdings, with certain exceptions. ¹²⁷ In particular, the SEC permitted an ETF to distribute a non-pro rata selection of its portfolio in certain situations: when it was impossible to break up bonds beyond certain minimum sizes; to take into account the need to eliminate fractional shares; if the portfolio included short positions, derivatives, and other positions that cannot be transferred in kind; on the days when a fund used representative sampling of its portfolio; and to effect changes in a fund's portfolio as a result of the rebalancing of the underlying index. ¹²⁸ If there was a difference between NAV and the value of the non-pro rata redemption unit, a fund could use or receive cash to make up the difference. ¹²⁹

The SEC had limited the use of custom baskets because of its concern that ETFs could potentially harm shareholders either through APs cherry-picking certain securities in a redemption transaction or dumping unwanted securities into ETFs in a contribution transaction. The SEC recognized, however, that there are situations in which custom baskets can benefit ETFs and their shareholders. For instance, it may be cheaper for APs to assemble or liquidate baskets that consist of a smaller number of securities, which in turn can reduce bid-ask spreads. Custom baskets could also help ETFs that hold hard-to-find securities from having to distribute them, or having to distribute cash in lieu of these securities, which could necessitate holding larger than desired cash positions. 132

Recognizing the potential benefits to ETFs and their shareholders of employing custom baskets, but also being cognizant of the potential for abuses, the SEC now permits virtually unfettered use of custom baskets. However, ETFs using these custom baskets must adopt and implement detailed written procedures that "set forth detailed parameters for the construction and acceptance of custom baskets that are in the best interest of the

 $^{^{127}}$ Exchange-Traded Funds, 83 Fed. Reg. 37332, 37355 (proposed Jul. 31, 2018). This change in SEC practice created a disparity between ETFs that were able to use custom baskets and those that were not.

 $^{^{128}}$ Rule 6c-11, supra note 10, at 57,184. See, e.g., The Dreyfus Corp., Application for an Order under Section 6(c) of the Investment Company Act of 1940 (Form 40-APP/A) (Sep. 28, 2016).

¹²⁹ Rule 6c-11, *supra* note 10, at 57184.

¹³⁰ Exchange-Traded Funds, 83 Fed. Reg. at 37355 (proposed Jul. 31, 2018).

¹³¹ Id.

¹³² *Id*.

C. AP Motivation for Heartbeat Trades

It is not readily obvious how an AP is compensated for tying up its capital for the duration of the related creation and redemption trades since all transactions between the AP and ETF are done at NAV. The AP must be able to hedge any financial exposure and earn a profit to cover its capital and hedging costs. An AP would not enter into the heartbeat trade without being able to hedge its price risks and cover its capital and execution costs.

Kashner dissects one particular heartbeat trade and demonstrates how the AP and its trading desks can profit on heartbeat rebalance transactions. ¹³⁵ It is important to note that these transactions are not done sui generis by an AP but are part of a highly structured and coordinated operation between an AP and ETF. Without the coordination, an ETF could not be assured that it could distribute the securities in-kind tax free when the rebalancing occurs and match the performance of the underlying index. In turn, the AP would certainly know that it was going to receive a custom basket instead of a creation basket of securities.

In the transaction analyzed by Kashner, for the appreciated shares included in the redemption basket, the AP and its trading desk profited by shorting the shares in the redemption basket at the volume weighted average price (VWAP) and receiving the shares in the redemption basket at their closing prices. ¹³⁶ In the case of actual sales by the ETF, for example of positions with built-in losses, the market makers potentially profited by selling at VWAP and purchasing from the ETF at closing. ¹³⁷ In the case of purchases by the ETF of new securities, the AP and its trading desk profited by purchasing at VWAP and selling to the ETF at closing. Thus, there can be opportunities for the AP, its trading desks, and market makers to benefit from the rebalancing trades.

 $^{^{133}}$ 17 C.F.R. § 270-6c-11(c)(3)(i) (2019). The ETF must also specify the titles or roles of the ETF's investment adviser's employees who are required to review compliance with the specified parameters. 17 C.F.R. § 270-6c-11(c)(3)(ii) (2019).

¹³⁴ 17 C.F.R. § 270-6c-11(a)(2) (2019).

 $^{^{135}}$ Kashner, The Heartbeat of ETF Tax Efficiency Part Three: Trade Forensics, supra note 18.

¹³⁶ Id. at 14. The shares received are delivered to close the short sales.

¹³⁷ *Id*.

The costs of these trades may be substantial, especially for an ETF that follows a strategy or an index that requires frequent rebalancing. In the trade analyzed by Kashner, the total profits of the parties working with the ETF were approximately six basis points, which is approximately twenty-four basis points annualized if the ETF rebalances quarterly. These are true economic costs borne by the ETF and its shareholders, but since these costs are not explicitly broken out, unlike management fees, they may fall under the radar of investors. In addition, the disclosures by ETFs generally mention custom baskets, but surprisingly do not generally discuss the financial costs of these trades on returns to investors. The costs of these trades on returns to investors.

D. The Tax Lollapalooza: Heartbeat Trades and Vanguard's Capital Structure Arbitrage

The prior subsection discussed how ETFs have employed highly structured heartbeat redemption transactions to ensure that virtually no equity ETF pays any capital gains taxes on portfolio adjustments. Individual investors, however, holding identical securities cannot make the same in-kind portfolio adjustments via heartbeat trades without recognizing gains and losses. Mutual funds also generally cannot use heartbeat trades to offload tax free appreciated securities via in-kind redemptions.

Given the significant benefits of Section 852(b)(6) for longterm taxable investors, creative planners have devised structures that permit ETFs to leverage Section 852(b)(6) and siphon off capital gains from related mutual funds through the Section 852(b)(6) redemption mechanism. The most well-known capital structure arbitrage is that employed by Vanguard.¹⁴⁰

¹³⁸ Id.

¹³⁹ See, e.g., Dimensional ETF Trust, Registration Statement (Form N-1A) 30–36 (June 25, 2020) (discussing of creation and redemption process, including the use of custom baskets, but not discussing potential costs to ETFs). For tax-exempt investors, these trades may not be beneficial.

¹⁴⁰ Vanguard applied for and was granted exemptive relief under Section 6(c) of the 1940 Act for exemptions under various sections of the 1940 Act, including Section 2(a)(32) (definition of redeemable security), Section 18(f)(1) and (i) (prohibition against issuing senior securities), 22(d) (prohibition against dealers selling redeemable security except at a price described in the prospectus), and Section 17(a)(1) and (a)(2) (prohibition of selling to or buying from an affiliate). See Vanguard Index Funds, Investment Company Act Release No. 24680, 65 Fed. Reg. 61005, 61007 (Oct. 13, 2000); Vanguard Index Funds, Investment Company Act Release No. 24789, 65 Fed. Reg. 79439 (Dec. 19, 2000).

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Vanguard structures most of its ETFs as a separate share class of their related mutual funds. For instance, the Vanguard Total Stock Market Fund Index has both various mutual fund share classes and an ETF share class. The mutual fund investors acquire and redeem their shares directly from the fund, but ETF investors purchase and sell their ETF shares through a broker. APs, however, create and redeem ETF shares from the mutual fund.

Structuring ETFs as a mutual fund share class provides potential benefits for both ETF and mutual fund shareholders. Since the ETFs will be part of a larger single asset base, the management expenses will be smaller than if an additional fund had to be created. The larger asset base allows a fund to track its index more accurately, since it will not have to do as much sampling while it builds its asset base. Market timers, who make frequent purchases and redemptions that impose administrative costs on long-term fund investors, can opt for the ETF class shares, which are better suited to market timing strategies, and thereby avoid imposing costs on other shareholders by their trading strategies. Market in trading strategies.

Perhaps the largest benefit of the dual class structure is the ability for the fund to distribute low-basis assets to APs when they redeem their ETF shares. He by itself, the dual class structure does not provide additional tax benefits for ETF shareholders that would not be available if the ETF were structured as a separate fund. But when an AP requests redemption of the ETF shares, the mutual fund can distribute low-basis securities to the AP and thereby reduce any future capital gain exposure for all the mutual fund shareholders, not only the ETF shareholders. Thus, although the AP creation and redemption process arguably adds no financial value for the mutual fund shareholders, except for sharing in fund expenses, the dual class structure allows

¹⁴¹ As of July 2, 2021, Vanguard has eighty-two ETFs, sixty-two equity ETFs, and twenty fixed income ETFs. *See Discover Vanguard ETFs*, VANGUARD (Oct. 4, 2022), https://perma.cc/7ZRL-D85A.

 $^{^{142}}$ The mutual fund ticker for the Admiral class shares is VTSAX, and VTI for the ETF shares. The fund has six classes of shares, five classes of mutual fund shares, and one class of ETF shares. The various mutual fund shares vary by their investment fees and investment minimums.

¹⁴³ U.S. Patent No. 6,879,964 B2 col. 3 (issued Apr. 12, 2005) [hereinafter Vanguard Patent]; Ben Johnson, Vanguard's Unique ETF Structure Presents Unique Tax Risks, MORNINGSTAR (Jan. 15, 2020), https://perma.cc/44LP-FPC7.

¹⁴⁴ Vanguard Patent, supra note 143, at col. 3.

 $^{^{145}\,}$ Id. at cols. 3 and 4.

¹⁴⁶ *Id*.

mutual fund shareholders to share in the tax benefits of Section 852(b)(6), which they could not otherwise do in a mutual fund without the ETF share class.

Annex 1 lists the largest Vanguard equity ETFs and the percentage of common stock the ETF shares represent. The smallest is the Vanguard Total International Stock Fund at 7.71%, and the largest is the Vanguard Information Technology ETF at 87.65%. The mean and median percentages are around 49%.

The dual-class structure presents some possible tax risks to ETF shareholders that would not be present if the ETF and mutual fund shareholders invested in separate funds. Large redemptions from mutual fund shareholders could cause the fund to have to liquidate appreciated positions to pay the redeeming shareholders, and any taxable gains would be shared among both mutual fund and ETF shareholders. 147 ETF shareholders could thus pay higher taxes than if they were shareholders in a separate fund. Although this scenario occurred at least once with a Vanguard fixed income fund, 148 it has not occurred in a Vanguard equity fund. From 2014 to 2019, the percentage ETF assets of total fund assets for Vanguard's largest twenty dual class share funds increased in seventeen of the funds, and in eighteen of the twenty funds, the ETF shares experienced greater net fund inflows than the mutual fund shares. 149 The increase in ETF assets gives the funds a greater opportunity to use in-kind redemptions to decrease overhang and reduces the risk that a large exit by mutual fund shareholders could cause adverse tax events for ETF shareholders.150

The dual class structure also facilitates converting mutual fund shares to ETF shares. Since both share classes are issued by the same corporation, any exchange of mutual fund shares for ETF shares is tax-free under Section 1036, which permits a shareholder to exchange common stock of a corporation for common stock of the same corporation. ¹⁵¹ A shareholder could not exchange

 $^{^{147}\,}$ Johnson, supra note 143 (describing the risk of mass exodus on mutual fund shareholders).

¹⁴⁸ *Id*.

¹⁴⁹ *Id*.

 $^{^{150}}$ A large exit of mutual fund shareholders would probably only occur if the market dropped significantly. In such case, however, the amount of overhang and potential tax liability would also decline.

¹⁵¹ In its prospectuses, Vanguard touts this option privilege. See Vanguard U.S. Stock ETFs, Prospectuses (Form 497K) (Apr. 29, 2021), https://perma.cc/XL2Y-F9C2. This is a one-way privilege, and ETF shareholders may not exchange their shares for mutual fund shares. See Vanguard Index Funds, Investment Company Act Release No. 24680, 65 Fed. Reg. 61005, 61007–61008 (Oct. 13, 2000).

tax-free ETF shares for mutual fund shares if the funds were separate corporations unless the transaction qualified as a reorganization.

Vanguard filed a patent for this structure in 2001, which was granted in 2005.¹⁵² This probably explains why other sponsors have not replicated the Vanguard structure. Although the patent is of questionable validity, it expires in 2023;¹⁵³ the door will be potentially open to other sponsors to adopt dual class capital structures, subject to SEC approval.¹⁵⁴

The combination of the dual class structure and heartbeat trades has been a tax boon for these Vanguard funds and their shareholders. A 2019 article in Bloomberg Businessweek detailed that since Vanguard added ETF share classes to some of its mutual funds and engaged in heartbeat trades, the funds stopped distributing any capital gains to any of their shareholders. The article estimates that Vanguard made more use of heartbeat trades—\$130 billion—from 2000 to 2018 than any of its competitors.

The article further highlights a massive heartbeat trade carried out by Vanguard Total Stock Market Index fund in connection with the taxable acquisition of Monsanto Co. by Bayer in 2018. On the verge of the acquisition, an AP purchased \$1 billion of the ETF VTI shares and two days later, it redeemed the same amount, which represented most of the \$1.3 billion of Monsanto shares owned by the fund. 157 The fund was one of the largest shareholders of Monsanto and had apparently owned Monsanto since the early 1990s, about a decade before Vanguard launched its first ETFs. The article lays bare the true benefit of the dual class shares for mutual fund shareholders: the ETF's share of the

¹⁵² Vanguard Patent, supra note 143.

¹⁵³ Yale, *supra* note 16, at 407 n.53. The patent will expire in May 2023. See Adrian D. Garcia, *Vanguard's special ETF patent expires next year. Does it matter?* FINANCIAL TIMES (Apr. 12, 2022).

¹⁵⁴ A sponsor considering adding an ETF share class to its mutual funds must apply for exemptive relief from Section 18(f)(1) and (i) of the 1940 Act. Section 18(f)(1) prohibits issuance of a class of senior security, which includes a stock class having priority over other classes in distribution of assets or payment of dividends. Section 18(i) requires that all investment company shares have equal voting rights. The SEC rejected applying Rule 6(c)-11 to share class ETFs on the grounds that share class ETFs may give rise to differing costs to the underlying portfolio, but these costs are shared by all shareholders. The SEC acknowledged that by not doing so it was potentially creating an uneven playing field, but it opted to continue to require a fund wishing to offer a share class ETF to seek exemptive relief. Rule 6c-11 at 57, 196.

¹⁵⁵ Mider et al., supra note 18.

¹⁵⁶ *Id*.

¹⁵⁷ Id.

Monsanto stock was \$184 million, only about 18% of the \$1 billion that was removed, but the ETF share class was the door through which the fund was able to remove 100% of its taxable gains.¹⁵⁸

Vanguard, with its dual class capital structure overlaid with heartbeat trades, is the posterchild of the tax infirmities of Section 852(b)(6). For long-term Vanguard equity ETF shareholders, ETFs potentially offer indefinite deferral of fund-level capital gains, even gains arising from portfolio adjustments in rebalancing trades. The dual class structure enables Vanguard mutual fund shareholders to also enjoy the same tax deferral as its associated ETF shareholders. It is certain that other fund families will consider adopting a similar capital structure to extend the benefit of heartbeat trades and in-kind redemptions to their mutual fund shareholders. 159

E. Summary

This Part illustrates how Section 852(b)(6) is exploited by ETFs and APs. The basic redemption and creation mechanism, coupled with the option to realize and carry over losses, reduces fund-level built-in gains and current and future realized gains. Any remaining built-in gain or overhang of an ETF is merely a tax mirage, as custom baskets and heartbeat trades are available to eliminate gains that are about to be realized in connection with index rebalancing, taxable mergers, or other portfolio adjustments. The coup de grâce is adding ETFs as a share class to affiliated mutual funds so that mutual fund shareholders can also share in the in-kind redemption tax spoils.

These tax gambits drive a wedge between the after-tax returns of ETFs and other investment vehicles such as mutual funds without an ETF share class, partnerships, and directly managed accounts. Although these trades satisfy the statutory requirements of Section 852(b)(6), i.e., they are distributions in redemption of a fund's stock, whether the form and purported tax results of these transactions should be respected is discussed next.

¹⁵⁸ Id.

¹⁵⁹ Eaton Vance has developed a similar offering, NextShares, which is an exchange traded managed fund. Like an ETF, a retail investor buys and sells on an exchange, but the price received or paid is not the market price at the time of sale but the next determined NAV plus or minus a trading cost. Note, no assets leave or are contributed to the fund in the case of retail trades. Like ETFs, APs can create and redeem shares in exchange for a contribution basket, which is a slightly narrower portion of the fund's portfolio. For a discussion, see Yale, *supra* note 16, at 428–32.

VIII. TAX COMMON LAW AND HEARTBEAT TRADES

In interpreting statutory tax provisions, courts have developed a panoply of common law doctrines that can be applied to recast the tax treatment of a transaction or series of transactions. These include the substance over form, business purpose, and step transaction doctrines, and they play an especially vital role in the interpretation of U.S. corporate tax provisions. ¹⁶⁰

Although these doctrines are pervasive and regularly applied to transactions by courts, regulators, and tax planners, determining whether they will or should be applied is often far from certain. One difficulty is that each disparate area of the Code where these doctrines have been applied has its own statutory and regulatory requirements and underlying policy concerns. Furthermore, over time, the analytical approach applied by courts and administrators has evolved. Nonetheless, heartbeat trades certainly raise significant substance over form issues.

A. Can Substance over Form be Applied to Pull the Plug on Heartbeat Trades?

Under the substance over form doctrine, the U.S. tax rules are applied to the economic substance of a transaction rather than to its form. ¹⁶² This doctrine has been applied to all corners of the Internal Revenue Code, including the distinction between debt vs. equity, ¹⁶³ reorganization vs. liquidation, ¹⁶⁴ reorganization vs. sale, and dividend vs. compensation, ¹⁶⁵ just to mention a few.

One variation of the substance over form doctrine is the step transaction doctrine under which ostensibly separate

 $^{^{160}}$ The cases, administrative guidance, and commentary on the substance over form doctrine and its corollaries are voluminous. See, e.g., Boris I. Bittker & Lawrence Lokken, Federal Taxation of Income, Estates and Gifts ¶ 4.3.1. (3rd ed. 2021); Boris I. Bittker & James S. Eustice, Federal Income Taxation of Corporations and Shareholders ¶ 12.02[2][a] (7th ed. 2021).

¹⁶¹ See BITTKER & LOKKEN, supra note 160 ("Unfortunately, it is almost impossible to distill useful generalizations from the welter of substance-over-form cases. The facts of the cases are usually complicated, and it is rarely clear which facts are crucial to the decision and which are irrelevant.").

¹⁶² United States v. Phellis, 257 U.S. 156, 168 (1921) ("We recognize the importance of regarding matters of substance and disregarding forms in applying the provisions of the Sixteenth Amendment and income tax laws enacted thereunder.").

¹⁶³ Fin Hay Realty Co. v. United States, 398 F.2d 694, 696 (3d. Cir. 1968) (listing relevant factors to determine whether debt instrument in form should be treated as equity).

¹⁶⁴ Davant v. Comm'r, 366 F.2d 874, 880 (5th Cir. 1966).

 $^{^{165}}$ Spicer Acct. Inc. v. United States, 918 F.2d 90, 92–93 (9th Cir. 1990) (distributions to shareholder of S corporation were wages for employment tax purposes).

transactions are disregarded or stepped together, and the transaction is taxed in accordance with the resulting aggregated or recharacterized transaction. Courts and the IRS have developed various formulations of the step transaction doctrine that determine when it will be applied: the end result test, the mutual interdependence test, and the binding commitment test. When these tests should be applied, however, is often difficult to determine. 166

The binding commitment test is the narrowest formulation of the step transaction doctrine, and it steps together transactions only when there is a legally binding commitment to complete another step or series of steps after a first step is taken. The mutual interdependence test focuses on whether nominally separate transactions should be combined because they are so interdependent that the legal relations created by one would be fruitless without the completion of the other. Finally, under the broadest approach, the end result test, transactions can be stepped together if they are "prearranged parts of a single transaction intended from the outset to reach the ultimate result."

As discussed above, heartbeat trades are highly structured, coordinated transactions between APs and ETFs. An ETF communicates with an AP and divulges the names and sizes of the securities positions that the ETF desires to dispose of tax-free via a heartbeat trade. Based on these communications, the AP then acquires a direct position¹⁷⁰ in the ETF shares comparable in size to the value of the securities that the ETF wishes to distribute

¹⁶⁶ MARTIN D. GINSBURG et al., MERGERS, ACQUISITIONS, AND BUYOUTS ¶ 608.3.1 (2015) ("[I]t often will be difficult to determine with a high degree of certainty whether a series of related transactions will be stepped together in some fashion for tax purposes."). New York State Bar Association, Report on the Role of the Step Transaction Doctrine in Section 355 Stock Distributions: Control Requirement and North-South Transactions 6 (Nov. 5, 2013) [hereinafter "NYSBA Step Transaction"] ("Neither the courts nor the Services have clear guidelines for determining which test should apply in a particular situation. Moreover, the boundaries between the tests themselves are not clear, and as a result, they have been applied inconsistently.").

¹⁶⁷ See, e.g., Comm'r v. Gordon, 391 U.S. 83, 96 (1968) (refusing to step together the distribution of stock rights representing together 100% of the corporation where the two distributions were separated by almost two years because there was no binding commitment to make the subsequent distribution of 43%); Intermountain Lumber Co. v. Comm'r, 65 T.C. 1025, 1033 (concluding that transfer of property to wholly owned corporation did not satisfy control test of Section 368(c) because transferor had entered into binding agreement to sell 50% of the shares).

¹⁶⁸ See Am. Bantam Car Co. v. Comm'r, 11 T.C. 397, 406 (1947), aff'd 177 F.2d 1235 (5th Cir. 1949), cert. denied, 339 U.S. 920 (1950).

¹⁶⁹ Penrod v. Comm'r, 88 T.C. 1415, 1429 (1987).

¹⁷⁰ The contribution can be securities, cash, or a combination thereof.

when the AP requests to redeem its shares. It is certain that the AP knows which securities it will receive from the ETF.

If both the AP contribution and redemption transactions were stepped together, heartbeat trades would be treated as an exchange between the ETF and AP of one portfolio of securities or cash (the contribution portfolio) for a portfolio of different securities (the redemption portfolio). Recast as an exchange of non-identical securities, the heartbeat trade would be taxable to both the AP and ETF.¹⁷¹

Since there appears to be no explicit binding commitment between the AP and ETF to redeem the AP with the custom basket following the AP's contribution, the binding commitment test would likely not apply. When courts apply the end result and interdependence tests, they examine the parties' intent and the time between the initial and subsequent transactions. Given the structured nature and joint planning involved in heartbeat trades between the AP and ETF, there is clear evidence of an intent to undertake both transactions. Furthermore, the extremely short period between the contribution and redemption legs—generally two to five days—supports treating them as a single transaction.

Without the initial significant contribution by an AP, the ETF would not be able to subsequently distribute via redemption the undesired securities, because the value of shares that are typically redeemed on a given day would be insufficient. Furthermore, it is clear that the AP would not make the outsized initial contribution without planning on requesting redemption of the ETF shares received shortly thereafter. The two transaction legs of a heartbeat trade are clearly related and arguably should be stepped together.¹⁷³

B. Do Heartbeat Trades Have Sufficient Business Purpose?

Another pillar of the tax common law, especially for corporate transactions, is the business purpose doctrine, under which the form of a transaction will not be respected if there is no business

¹⁷¹ An AP would be indifferent between an exchange for shares of the ETF or for shares of the custom basket since both transactions would be taxable.

¹⁷² GINSBURG, *supra* note 166, at ¶¶ 608.3.2.1. and 608.3.2.2.

¹⁷³ See also Hodaszy, Section 852(b)(6) Loophole, supra note 26, at 594–98 (stating without significant discussion that heartbeat trades should be treated as taxable exchanges between APs and ETF applying step transaction principles).

purpose other than tax avoidance.¹⁷⁴ The most famous exposition of the business purpose doctrine is *Gregory v. Helvering*,¹⁷⁵ in which the Supreme Court found that a purported reorganization that complied with the statutory requirements would not be respected because there was no business purpose:

Putting aside, then, the question of motive in respect of taxation altogether, and fixing the character of the proceeding by what actually occurred, what do we find? Simply an operation having no business or corporate purpose—a mere device which put on the form of a corporate reorganization as a disguise for concealing its real character, and the sole object and accomplishment of which was the consummation of a preconceived plan, not to reorganize a business or any part of a business, but to transfer a parcel of corporate shares to the petitioner.¹⁷⁶

Since *Gregory*, the business purpose enquiry has often been employed as one prong of the economic substance or sham transaction doctrine. Under this approach, a transaction can be treated as a sham and disregarded if either the transaction has no real potential for profits apart from its tax benefits or the taxpayer had no non-tax motives and no legitimate business purpose for entering into the transaction.¹⁷⁷ This approach is similar to that now required under Section 7701(o) for transactions for which the economic substance doctrine is relevant.¹⁷⁸

Two cases in the early 2000s, *IES Industries*, *Inc.* v. *United States*¹⁷⁹ and *Compaq Computer Corp.* v. *Commissioner*, ¹⁸⁰ addressed the issue of whether virtually simultaneous purchases

¹⁷⁴ The business purpose doctrine is a fundamental requirement for reorganizations. Treas. Reg. §§ 1.368-1(b) (reorganization must be required by business exigencies); 1.368-1(c) (transaction structured as reorganization having no business or corporate purpose is not a plan of reorganization).

 $^{^{175}\ \ 293}$ U.S. 465 (1935).

^{176 293} U.S. at 469.

¹⁷⁷ See, e.g., Wells Fargo & Co. v. United States, 957 F.3d 840, 847 (8th Cir. 2020); United Parcel Service of America, Inc. v. Comm'r, 254 F.3d 1014, 1019 (11th Cir. 2001) (restructuring of insurance business by placing it in Bermuda corporation owned by the same shareholders as UPS found to be simply an altered form of bona fide business that had real economic effects and a business purpose).

 $^{^{178}}$ I.R.C. § 7701(o) (transaction has economic substance only if the transaction changes the taxpayer's economic position, and the taxpayer has a substantial non-tax (business) purpose for entering into the transaction). Section 7701(o) potentially applies to post-March 31, 2010 transactions. See I.R.S. Notice 2010-62, 2010-40 C.B. 411.

¹⁷⁹ IES Indus., Inc. v. United States, 253 F.3d 350 (8th Cir. 2001), rev'g IES Indus., Inc. v. United States, No. C97-206, 1999 WL 973538, at *2 (N.D. Iowa Sept. 22, 1999).

 $^{^{180}}$ Compaq Computer Corp. v. Comm'r, 277 F.3d 778 (5th Cir. 2001), rev'g Compaq Computer Corp. v. Comm'r, 113 T.C. 214, 214 (T.C. 1999).

and sales by a U.S. corporation over the record date of American Depository Receipts (ADRs),¹⁸¹ which were trading cum dividend and were on the verge of trading ex-dividend,¹⁸² were sham transactions.

The ADRs were owned by tax-exempt entities, which could not benefit from any foreign withholding tax levied on the dividends: \$1 of dividend subject to a 15% withholding tax would be worth \$0.85 to the tax-exempt owner. The tax-exempt entity would loan the ADRs to a third party that would sell them cum dividend to the U.S. corporation and then simultaneously repurchase them ex-dividend from the U.S. corporation. 183 Compag and IES engaged in these structured trades to generate capital losses to offset significant realized capital gains. 184 Since the cum and ex price of the shares would differ approximately by the amount of the dividend less any withholding tax, 185 the taxpayers would recognize a capital loss equal to the difference between the cum and ex prices, and would receive a gross dividend of \$1 and a net dividend of \$0.85 after the foreign withholding tax. 186 Consequently, to the U.S. corporation, \$1 of gross dividend was worth \$1 (\$0.85) gross receipts plus the \$0.15 foreign tax credit for the withholding tax) plus the tax benefit from the \$0.85 capital loss.

The government prevailed in Tax Court against Compaq and in the Iowa District Court against IES. Both lower courts focused on the issue of determining whether the taxpayers had a reasonable possibility of making a pre-tax profit from the transactions. In *IES*, the Iowa District Court found that the structured trades

¹⁸¹ ADRs are publicly traded securities that represent shares of a foreign corporation held in trust by a U.S. bank.

 $^{^{182}}$ A share trades cum dividend if the purchaser would be entitled to a declared dividend, since the purchaser would be the record date owner. A shares trades ex dividend if the purchaser would not be entitled to the declared dividend since the trade would settle after the record date.

¹⁸³ The purchase legs were made with special, next-day settlement, while the sales legs were made via the standard five-day settlement. *Compaq*, 133 T.C. at 217. The Compaq trades were broken up into 46 transactions of around 450,000 ADRs and completed in a little over an hour. Thus, Compaq was exposed to market risk for approximately 2-3 minutes. *Compaq*, 277 F.3d at 780. In the case of IES, the trades took place within hours of each other, sometimes on foreign exchanges, and sometimes when the U.S. market was closed. *IES*, 253 F.3d at 352.

 $^{^{184}}$ Compaq had recognized a long-term capital gain of \$231 million, and IES had a recognized long-term capital gain in excess of \$82 million. $Compaq,\ 113\ \mathrm{T.C.}$ at $214;IES,\ 253\ \mathrm{F.3d}$ at 353.

 $^{^{185}}$ Compaq, 133 T.C. at 223. This is an instance where the price of the \$1 of foreign dividends was not \$1 but \$0.85. Presumably the marginal purchaser could not otherwise use the foreign tax credits.

 $^{^{186}\,}$ In both cases, the tax payers incurred other fees and expenses, and deducted those as well.

did not change IES's economic position and were "solely shaped by tax avoidance consideration, had no other practical economic effect, and [were] properly disregarded for tax purposes." ¹⁸⁷

In *Compaq*, the Tax Court found that the ADR trades lacked economic substance because there was no reasonable possibility of a pre-tax profit. In determining whether there was the possibility of pre-tax profit, the Tax Court rejected including the foreign withholding taxes as additional income and instead analyzed the transaction on a cash flow basis, concluding that the transaction had a net economic loss. The Court also concluded that given the highly structured nature of the various ADR trades, the taxpayer had no market risk and thus no business purpose for the trades. The court also concluded that the taxpayer had no market risk and thus no business purpose for the trades.

Both cases, however, were reversed on appeal. In *Compaq*, the Fifth Circuit Court of Appeals treated the foreign withholding taxes as income from the transactions and found that Compaq had a reasonable possibility of earning a pre-tax profit. This is because the difference between the purchase and sales price was 85% of the dividend, while Compaq received 100% of the dividend, after including the foreign withholding tax. ¹⁹⁰ After taking into account both U.S. and foreign taxes, Compaq showed a net profit of \$1.3 million. ¹⁹¹

In *IES*, the Eighth Circuit Court of Appeals similarly held that the transactions were not shams and should not be disregarded for tax purposes. The court found that the economic benefit to IES was the gross amount of the dividend, and since the price paid exceeded the selling price by the net amount of the dividend, IES made a profit. This was sufficient to demonstrate that the purchase-sale transactions satisfied the economic substance test. Furthermore, the court found that the transactions had sufficient business purpose on the basis of IES's vetting of the transactions with its legal counsel, assumption of risk of loss

¹⁸⁷ IES, 1999 WL 973538 at *2.

¹⁸⁸ Compaq, 133 T.C. at 223.

¹⁸⁹ *Id.* at 224 (noting that the ADR trades were executed at a price determined by agent of the seller of the transaction, were divided into 23 purchase and resale cross-trades within an hour on the floor of the exchange and were executed with non-standard settlement to prevent risk of breaking up the trades).

 $^{^{190}}$ There were associated fees and expenses with the transaction. In Compaq, the fees and expenses were about \$1.5 million. Compaq, 133 T.C. at 223.

 $^{^{191}}$ This represents a pre-tax profit of \$1.9 million less approximately \$640,000 of U.S. taxes.

 $^{^{192}\,}$ $I\!ES,\,253$ F.3d at 354.

(albeit a minimal risk), and due diligence meetings with the promotor of the trades. 193

Although the principal issue in determining whether IES and Compag had the possibility of pretax profit was whether pretax profit should be calculated after the foreign withholding taxes but before U.S. tax or whether both taxes should be treated similarly, and this issue is not present in the case of heartbeat trades, it is possible that an AP may be able to demonstrate that it had a reasonable expectation of economic profit in contributing capital to an ETF and then redeeming the ETF shares received two days or so afterwards. An AP may potentially realize profits on the difference between the cost of the contribution portfolio, to the extent it consists of shares, and the value of the ETF shares received. The AP may also be able to profit from disposing of the shares of the custom basket received from the ETF when the AP redeems. 194 This is a factual question that would have to be determined by analyzing the constituent elements of the transaction. Since the AP will certainly hedge the long position in the ETF shares, it is not purchasing the ETF shares with the hope that they will appreciate in value over the duration of the heartbeat trade.

Given that an ETF will generally only distribute appreciated assets, it should be able to demonstrate a pretax profit and a change in economic position, since its portfolio will change. Similarly, an ETF may be able to argue that it has a business purpose in engaging in heartbeat trades. For instance, it may be cheaper for the ETF to dispose of the shares of a custom basket through an in-kind distribution instead of selling them on the open market. Also, if the value of the shares of the custom basket is significant, a sale would generate cash that would either have to be reinvested or distributed, which could affect the ETF's tracking error or generate increased administrative costs and fees. Against this potential benefit, however, the ETF should net costs to the ETF from the AP's trading activity with respect to the shares distributed in the custom basket. 195

 $^{^{193}}$ Id. The same circuit court distinguished IES in 2020 in the context of a structured trust advantage repackaged securities transaction (STARS) in $Wells\ Fargo\ \&\ Co.\ v.\ United\ States,$ 957 F.3d 840, 847 (8th Cir. 2020). The STARS transaction also involved the treatment of foreign taxes, and the court in $Wells\ Fargo$ concluded that they were a pre-tax expense rather than a post-tax expense as in IES.

 $^{^{194}}$ See Kashner, The Heartbeat of ETF Tax Efficiency Part Three: Trade Forensics, supra note 18.

¹⁹⁵ ETF registration statements mention custom portfolios, but they do not address any potential costs to the ETF. See, e.g., Dimensional ETF Trust, Registration Statement

Even if the contribution and redemption transactions are related, and assuming they have insufficient business purposes, it is not clear that they will always be stepped together. In various rulings, the IRS has qualified the application of the step transaction doctrine to related transactions by examining whether the transactions are inconsistent with the purpose and intent of the applicable code provisions. ¹⁹⁶

C. Heartbeat Trades and North-South Transactions

In Revenue Ruling 2017-9,¹⁹⁷ the IRS ruled on the application of the step transaction doctrine to so-called North-South transactions, which occur in Section 355 transactions. In a North-South transaction, one corporation (parent) contributes property to a subsidiary (distributing), which is followed by a spinoff distribution of the stock of another subsidiary (controlled) to parent.¹⁹⁸ Both the north and south legs are undertaken as part of the same overall plan. The North-South transactions share some similarities with heartbeat trades: there is contribution of property (the south) in exchange for shares followed by a planned, nearly simultaneous distribution of property (the north) to the initial contributor in redemption of the same shares. The main difference is that the north leg is a pro rata distribution in the Section 355 ruling, but it is a redemption in the case of a heartbeat trade.

If the two legs of the North-South transaction were stepped together, the transaction could be recast as if parent had transferred property to distributing in exchange for a portion of the shares of controlled that are subsequently received via a spinoff. The south leg would be a taxable disposition to parent of any assets transferred to contributing instead of a tax-free contribution under Section 351.200 Furthermore, if the property

⁽Form N-1A) 30-36 (June 25, 2020) (discussing creation and redemption process, including the use of custom baskets, but not discussing potential costs to ETF).

 $^{^{196}}$ See, e.g., Rev. Rul. 2017-9, I.R.B. 1244, and Rev. Rul. 79-250, 1979-2 C.B. 156, modified by Rev. Rul. 96-29, 1996-1 C.B. 50.

¹⁹⁷ Rev. Rul. 2017-9, I.R.B. 1244.

¹⁹⁸ The purpose of the south transfer in the ruling is to permit distributing to satisfy the active trade or business test of Section 355(b)(1)(A).

¹⁹⁹ For example, if parent contributed \$25 to distributing, and the value of the shares of controlled were \$100, parent would be treated as purchasing 25% of the shares of controlled for cash (or other property) and receiving the remaining 75% via distribution. If the two legs are respected as separate transactions, the south transfer would be tax-free under Section 351, and the north spin-off would be tax-free under Section 355, assuming that all of its requirements were otherwise satisfied.

 $^{^{200}}$ If the property were appreciated, gain would be recognized under Section 1001(c), but any loss would be disallowed or deferred under Section 267(a) or (f).

transferred by parent were greater than 20% of the value of shares of controlled, distributing would fail the requirement that it transfer control (80% or more) of distributing shares under Section 355(a)(1)(D), and distributing would have to recognize gain under Section 311(b).

In determining whether the North-South transactions should be stepped together, the IRS stated that it would examine the "scope and intent underlying each of the implicated provisions of the Code."²⁰¹ The ruling stated that a taxpayer's form will be respected unless: there is a compelling alternative policy; the effect of all or part of the steps of the transaction is to avoid a particular result intended by otherwise-applicable Code provisions; or the effect of all or part of the steps of the transaction is inconsistent with the underlying intent of the applicable Code provisions.²⁰²

Applying these criteria, the IRS held that each leg should be given independent significance. The south contribution would be respected because it is generally permissible to transfer assets tax-free within the same corporate group to enable a subsequent distribution to qualify under Section 355(b).²⁰³ The purpose of Section 355(b)(2)(C) and (D), according to the ruling, is to limit taxable acquisitions of active trade or businesses from third parties; in the ruling, the acquisitions were all from related parties.

Given that the south contribution was respected as a separate transaction, the ruling concluded that Section 355 should apply to the north transaction since "each step provides for continued ownership in modified corporate form [and] the steps do not resemble a sale, and none of the interests are liquidated or otherwise redeemed."²⁰⁴ Furthermore, the ruling noted that the North-South steps were "consistent with the policies underlying sections 351 and 355."²⁰⁵

In Revenue Ruling 2003-51, the IRS had previously applied a similar purposive analysis to multiple related dropdowns under

²⁰¹ Rev. Rul. 2017-9, I.R.B. 1244.

²⁰² Id.

²⁰³ The ruling cited Rev. Rul. 78-442, 1978-2 C.B. 143 (357(c) gain in a Section 351 transfer does not violate the requirement that no gain or loss is recognized if an active trade or business acquired within five years); Rev. Rul. 74-79, 1974-1 C.B. 81 (tax-free liquidation of subsidiary with active trade or business enabled parent to meet active trade or business requirement); and Rev. Rul. 78-330, 1978-2 C.B. 147 (cancellation of debt between a parent and subsidiary prior to the merger of the subsidiary into a related subsidiary so that no gain would be recognized under Section 357(c)(1)(B) would be respected as having independent economic significance "because it resulted in a genuine alteration of a previous bona fide business relationship.").

²⁰⁴ Rev. Rul. 2017-9, I.R.B. 1244.

²⁰⁵ Id.

Section 351 and permitted each transaction to be analyzed separately.²⁰⁶ In the ruling, a shareholder transferred property to a corporation in a 351 transaction, but immediately after the transfer and pursuant to a binding agreement, the shareholder transferred the stock received to another corporation. Simultaneously with the second transfer, another party transferred cash to the second corporation. The two shareholders were in control of the second corporation.

Had the two transfers been stepped together, the requirements of Section 351 would not have been satisfied because the transferor in the initial dropdown would not have had control of the corporation immediately after the exchange.²⁰⁷ The IRS ruled that losing control via another related, non-taxable Section 351 transfer was "not necessarily inconsistent with the purposes of section 351."²⁰⁸

The purposive approach employed in these rulings perhaps supports an argument that even if the separate legs of the heart-beat trades are clearly related and could otherwise be stepped together and recharacterized as a taxable exchange between the AP and an ETF under traditional step transaction doctrines, the separate legs should be respected. The difficulty in applying a purposive approach, however, is to determine the underlying intent or purpose of a particular Code section.

Section 852(b)(6) exempts a fund from recognizing gain when it distributes appreciated property in redemption of its shares, which occurs in the second leg of a heartbeat trade but also when an AP requests redemption to take advantage of pricing discrepancies between the creation portfolio and NAV. One could argue that since the statute does not impose any restrictions on redemptions by investment companies, an investment company should never recognize gain when distributing appreciated property. The dearth of legislative history and the fact that Section 852(b)(6) predates the first ETF by more than twenty years makes it difficult to extract any definitive purpose or intent from Section 852(b)(6). When the predecessor to Section 852(b)(6) was enacted, however, in-kind distributions by RICs were uncommon and almost certainly not undertaken in connection to related contributions. Consequently, redemptions related to contributions may fall outside of Section 852(b)(6).

²⁰⁶ Rev. Rul. 2003-51, 2003-1 C.B. 938.

 $^{^{207}}$ Control is defined as 80% or more of the voting power of all classes of voting stock and 80% or more of the total number of shares of all other classes of stock. I.R.C. \S 368(c). 208 Rev. Rul. 2003-51, 2003-1 C.B. 938.

D. Heartbeat Trades and Esmark

In *Esmark v. Commissioner*,²⁰⁹ the Tax Court addressed the treatment of Esmark's distribution of appreciated stock of a subsidiary in redemption of its shares acquired the same day in a cash tender offer. Esmark solicited bids to dispose of the appreciated shares of a subsidiary, Vickers. Through its banker, Esmark indicated a preference for a tender offer/redemption transaction in which the acquirer would first make a tender offer for shares of Esmark roughly equal in value to the shares of Vickers and then be redeemed immediately by Esmark with shares of Vickers.²¹⁰

The primary reason for the tender offer/redemption structure was that Esmark would not recognize gain on the distribution of the Vickers shares, and its shareholders would realize the highest end value for their Esmark shares.²¹¹ Another purpose for the tender offer/redemption transaction was for Esmark to change its capital structure by reducing shares outstanding, in this case by more than 50%.²¹²

Mobil was the successful bidder for the Vickers shares, agreeing to acquire Vickers via a tender offer/redemption transaction. Mobil completed the tender offer for 11.9 million shares, and on the same day and pursuant to an exchange agreement, Esmark redeemed Mobil's shares for 97.5% of the Vickers stock.

In 1980, when the transaction was completed, the distribution of appreciated stock was generally taxable to the distributing corporation,²¹³ but if the distributing corporation owned 50% or more of the corporation whose stock was distributed, the distribution would be tax free.²¹⁴ Since Esmark owned 100% of Vickers, if the exemption applied, the distribution would be tax-free to Esmark. Section 852(b)(6) was formerly part of the same section in 1980, and the authorities' interpretations of redemptions of appreciated securities are likely to be relevant to the interpretation of Section 852(b)(6).²¹⁵

²⁰⁹ 90 T.C. 171 (1988), aff'd 866 F.2d 1318 (7th Cir. 1989).

 $^{^{210}}$ Id at 175.

 $^{^{211}}$ Id. at 176.

 $^{^{212}}$ Id. at 187.

²¹³ I.R.C. § 311(d)(1) (1982).

 $^{^{214}}$ I.R.C. § 311(d)(2)(B)(i)-(iii) (1982). The corporation whose stock was distributed had to be engaged in at least one trade or business and not have received property tax free from the parent company that constitutes a substantial part of its assets within the previous five years. Id.

²¹⁵ I.R.C. § 311(d)(2)(E) (1982).

The IRS advanced various substance-over-form arguments for treating the redemption as a taxable disposition by Esmark of the Vickers shares, all of which were rejected by the Tax Court. The IRS argued under assignment of income principles that the transaction should be recast as a sale by Esmark to Mobil for cash, with Mobil being obligated to transfer the cash to the redeeming shareholders and Mobil transferring back to Esmark the shares as proof of payment. The Tax Court rejected this argument because the right to share in the proceeds of the deemed sale was not measured by each shareholder's stake in Esmark, but by how many shares of Esmark each shareholder was willing to tender.²¹⁶

In response to the IRS's argument that Mobil's ownership of Esmark was too transitory to be respected, the Tax Court, relying on its decision in *Standard Linen Service, Inc., v. Commissioner*,²¹⁷ treated the purchase of shares from shareholders by a third party and subsequent redemption of those shares with assets that the purchaser wished to acquire as a sale of stock and redemption. The Tax Court similarly held that Mobil's ownership was not transitory because the transaction changed the ownership of the corporation, resulted in the disposition of an entire line of business, and served corporate as well as shareholder purposes.²¹⁸

Finally, the Tax Court rejected application of the step transaction doctrine, which in this case, the IRS argued, would treat the transaction as a sale of the Vickers shares to Mobil for cash followed by a self-tender offer by Esmark.²¹⁹ The Tax Court found that such a recharacterization was inappropriate as it would not merely combine steps but create steps that had not occurred.²²⁰ Again, the Tax Court noted that the transactions had two objectives, the disposition of Esmark's energy business and a redemption of stock, and while there were various paths to accomplish

^{216 90} T.C. at 188. The Tax Court also rejected the IRS's argument that Mobil did not possess the attributes of ownership on the grounds that the tendering shareholders surrendered all incidents of ownership when the tender offer closed and therefore had no right to receive any distributions of corporate assets. *Id.* at 194. Similarly, responding to the argument that Mobil purchased Vickers for cash and was a conduit for the transfer of the same cash from Esmark to its shareholders, the Tax Court found Esmark could not bind its shareholders to retain or sell their stock, and Esmark was under no obligation to purchase its shares from the public, and therefore Mobil's purchase of Esmark stock should be respected and Mobil could not be treated as a conduit. *Id.*

²¹⁷ 33 T.C. 1 (1959).

²¹⁸ 90 T.C. at 189.

 $^{^{219}}$ 90 T.C. at 196.

²²⁰ Id.

both goals, Esmark was free to choose the path that resulted in the least tax.

Given that the provision addressed in *Esmark* was virtually identical to the predecessor of Section 852(b)(6), would a challenge to heartbeat trades on a substance over form basis suffer the same result as in Esmark? There are some significant differences between heartbeat trades and the tender offer/redemption transaction in Esmark. Most important, in a heartbeat trade there is no other purpose to the trade than to remove the appreciated shares; whereas in Esmark, the Tax Court noted that Esmark had two goals: to sell the Vickers energy business and to change its capital structure by reducing the shares outstanding. 222 This fact was key and formed the basis for the Tax Court rejecting the IRS's various substance over form arguments. Also, in Esmark Mobil dealt separately with the selling shareholders, and its cash went to them and not to Esmark. In a heartbeat trade, the AP contributes the property to the ETF and gets back the shares from the ETF. Furthermore, unlike in *Esmark*, application of the step transaction doctrine to a heartbeat trade would not require creating any new steps, but it would merely step together the contribution and redemption legs to create one taxable exchange between the AP and the ETF of one basket of shares for another.

E. Heartbeat Trades as Constructive Sales

Under Section 1259, if a taxpayer owns an appreciated financial position, which includes any position with respect to stock, and there is a constructive sale of the position, the taxpayer must recognize gain as if the appreciated financial position were sold for its fair market value on the date of the constructive sale.²²³ A constructive sale includes entering into a forward contract to deliver the same property (a short forward contract), and to the extent provided in regulations, entering into a transaction that has substantially the same effect as a short forward contract.²²⁴

²²¹ Id.

 $^{^{222}}$ In the case of a heartbeat trade, it could be possible to argue that the goal of the transaction is to both sell shares and change the ETF's portfolio.

 $^{^{223}}$ I.R.C. § 1259(a)(1) (taxpayer must recognize gain on constructive sale of appreciated financial position); id. at (b)(1) (appreciated financial position means any position with respect to stock with a built-in gain).

 $^{^{224}}$ Id. §§ 1259(c)(1)(C) (entering into a short forward contract on the same property is constructive sale); (c)(1)(E) (constructive sale includes transactions that have substantially the same effect as forward sale).

A forward contract is a contract to deliver property in the future for a price agreed upon today. Since forward contracts are credit transactions, the forward price is simply the price today plus an interest charge. The purchaser in a forward contract benefits if the price increases after the forward contract is entered into and before delivery, whereas the seller benefits if the price declines after the contract is entered into and before delivery. Thus, the seller in a forward contract is economically short the underlying asset, and the buyer is economically long. Consequently, if a taxpayer owns an appreciated stock position and enters into a forward contract to sell the appreciated stock position, the taxpayer has eliminated its risk of loss and possibility of gain on the stock position, and this triggers a constructive sale under Section 1259.

In the case of a heartbeat trade, there is no explicit forward contract between the AP and ETF, but the related contribution and redemption legs function similarly to a pre-paid forward contract in which the AP is prepaying the forward price for the appreciated securities with the contribution leg and receiving the appreciated securities via the redemption leg two days later.

Since, however, there is no explicit obligation to distribute the exact securities comprising the redemption custom basket, it could be argued that the securities are not being delivered pursuant to a forward contract on those securities. Furthermore, given the lack of regulations under Section 1259, it is unlikely that the IRS could treat a heartbeat trade as a constructive sale.

F. Summary

Heartbeat trades are highly structured transactions between APs and ETF sponsors: the AP contribution leg of one custom basket of shares or other property is integrally tied to the subsequent ETF redemption leg consisting of appreciated shares that the ETF no longer wishes to hold. There is ample basis to step together the two transactions under either the end-result test or mutual interdependence test and to treat the transactions in accordance with their substance: a taxable exchange of shares or property between the AP and ETF.

The prior discussion has shown, however, the uncertainty of the application of the various pillars of the substance over form doctrine—business purpose and step transaction—even to highly

 $^{^{225}}$ Id. § 1259(d)(1) (defining "forward contract" as "a contract to deliver a substantially fixed amount of property . . . for a substantially fixed price").

structured transactions, such those in *Compaq* and *Esmark*. Thus, barring a court revisiting the rationale of these decisions, there is authority to treat heartbeat trades as separate transactions.

Furthermore, since Section 852(b)(6) is not limited in any way by its terms, it may not violate the purpose of the statute to redeem an AP with a custom basket of shares even though the AP had contributed other shares or property as part of a related transaction. Finally, since an AP arguably changes its economic position by contributing property to an ETF and is exposed to market risk, existing jurisprudence may support a position that the separate legs of the heartbeat trade should be respected.

Given the increasing importance of ETFs in U.S. capital markets, the tax policy issues raised by allowing ETFs to make tax-free portfolio adjustments via heartbeat trades, thereby permitting their shareholders to defer all tax on their funds' capital gains, should be addressed by Congress instead of by application of common law tax principles. As discussed in the next Part, it is certain that creative tax planners will continue to expand the use of Section 852(b)(6), which may provide the necessary impetus for Congress to overhaul Section 852(b)(6).

IX. SECTION 852(b)(6) NEEDS TO BE REFORMED

It could be argued that since Subchapter M is intended to be a pass-through regime with no entity-level taxation, there is not the same need to protect the tax base of investment companies as there is for C corporations. Since the unrealized gains and losses of an investment company's assets are reflected in NAV, an argument could be made to ignore any built-in gains that leave an investment company when it distributes appreciated property, because those gains will eventually be taxed at the shareholder level. The combination of Section 852(b)(6) and heartbeat trades ensures this result for equity ETFs, but not for mutual funds and individual investors.

This argument should be rejected on various grounds. If realized fund-level gains should not be taxed until a shareholder disposes of her shares, the same argument should therefore also apply to any income earned and reinvested by an investment company, including dividends, interest, short-term capital gains, and realized capital gains, which are also reflected in NAV.²²⁶ This is

²²⁶ A bill to exempt taxable mutual fund investors from current taxation on reinvested capital gains dividends from RICs has been periodically introduced in Congress. *See, e.g.*,

not sound tax policy as it would treat realized returns earned through a RIC more favorably than those earned directly by a RIC's shareholders.

The current system has created a tax divide between equity ETFs and other investment companies, such as mutual funds and closed-end funds, which generally cannot readily avail themselves of the benefits of Section 852(b)(6) and heartbeat trades. A shareholder of a mutual fund that follows the same investment strategy or tracks the same index as an ETF will generally have lower after-tax returns than the ETF shareholder, even though they are both subject to the same tax regime of Subchapter M and have the same economic exposure.²²⁷ Furthermore, shareholders of an equity ETF are able to benefit from tax-free portfolio adjustments by the fund, whereas direct investors and mutual fund and closed-end shareholders generally cannot. There is no indication that Congress has fully considered how Section 852(b)(6) has created a significant tax divide among different investment companies and between ETFs and individual investors.

A. Can Mutual Funds Play the ETF Section 852(b)(6) Tax Game?

Mutual funds can, in theory, use Section 852(b)(6) to obtain the same tax benefits as ETFs, without having a distinct ETF share class like certain Vanguard funds.²²⁸ Since mutual funds issue "redeemable securities," which give the issuer the option to redeem a shareholder in cash or in kind, there is no statutory

Generate Retirement Ownership through Long-Term Holding Act of 2009, H.R. 3429, 111th Cong. (2009).

 $^{^{227}}$ See Moussawi, supra note 12, at 4 (finding that ETFs have 0.65% lower tax burdens than large-cap and small-cap index funds).

 $^{^{228}\} See\ supra$ Part VII.D.

limit on the ability to redeem in kind.²²⁹ The only limitation would be if a fund had committed to pay cash for small redemptions.²³⁰

Even though mutual funds are permitted to make in-kind redemptions, they are still rare.²³¹ Commentators have identified various limits on the ability of mutual funds to use in-kind redemptions, including contractual arrangements between mutual funds and intermediaries, concerns of intermediaries about delays in receiving securities, and the possibility that any agreement by a fund to make payments to some shareholders in a manner different from payments to other shareholders, such as cash only rather than cash or in-kind, would be deemed to create a senior security in derogation of Section 18(g) of the 1940 Act.²³² To the extent that these limits are contractual, it may be possible to amend the contracts to facilitate in-kind redemptions, and some commentators have suggested that there may be a market opportunity for an intermediary to offer an in-kind redemption service to mutual funds.²³³

The ability of a mutual fund to redeem in kind could provide mutual fund shareholders with some of the tax benefits that inure to ETF shareholders, such as decreased cost of selling securities, and of course, the potential to distribute low basis shares and

^{229 15} U.S.C. §§ 80a-2(a)(32), 80a-5(a)(1) (defining "redeemable security," which entitles holders to receive proportionate share of issuer's net assets or cash equivalent, and "open-end company"). The SEC has interpreted this provision "as giving the issuer the option of redeeming its securities in cash or in kind." Election by Open-End Investment Companies to Make Only Cash Redemptions, Investment Company Act release 6561, 36 Fed. Reg. 11919 (June 23, 1971) (adopting Rule 18f-1 and Form N-18F-1). Under a rule adopted in 2016 in connection with revisions aimed at improving fund liquidity risk management, the SEC requires that a fund that engages in or reserves the right to engage in redemptions in kind must establish policies and procedures regarding how and when it will engage in such redemptions in kind. 17 C.F.R. § 270.22e-4(b)(1)(v) (2021). The same rules amended Form N-1A, the registration statement for open-end management investment companies, to require a fund to state the methods that a fund typically expects to use to meet redemption requests, including the ability to redeem in kind. SEC Liquidity Management, supra note 93, at 82210 (amending Form N1-A by adding new paragraph (c)(8) under Item 11).

²³⁰ 17 C.F.R. § 270.18(f)-1 (2022). The election is made on Form N-18F-1.

²³¹ Redemptions in kind by mutual funds are often considered to be "a last resort or emergency measure." SEC Liquidity Management, *supra* note 93, at 82210. For the period from 1997 to 2017, a team of researchers has found that around 70% of the U.S. equity funds reserved the right to pay redemptions in kind, and 13.1% of the funds that reserved this right actually engaged in in kind redemptions at least once. Vikas Agarwal et al., *supra* note 96 (manuscript at 3–4). The same researchers found that the in-kind redemption transactions were economically significant: the mean and median dollar amounts were \$153 million and \$70 million. *Id*.

 $^{^{232}}$ Paul M. Miller and Christopher D. Carlson, $Can\ the\ Tax\ Efficiencies\ of\ ETF\ Redemptions\ In-Kind\ Be\ Replicated\ for\ Mutual\ Funds,\ 27\ Invest.\ Law.\ 1,\ 3\ (Feb.\ 2020).$ $^{233}\ Id.$ at 4.

reduce fund overhang. The SEC has indicated that the new obligations for a fund to establish policies and procedures for in-kind redemptions would address these issues as well as address how a fund would select securities to use in an in-kind redemption and whether it plans to redeem securities on a pro rata or non-pro rata basis. The concern with non-pro rata redemptions is that the securities are properly valued so that shareholders are not diluted.²³⁴

Because mutual funds must issue and redeem shares at day end NAV, it may be difficult to structure trades that would be profitable for a mutual fund investor. For plain vanilla redemptions, it may be difficult to find sufficient investors willing to receive shares in kind upon redemption from a fund. This makes it difficult for a fund to whittle down built-in gains through everyday redemptions. For heartbeat trades, if part of the strategy involves shorting the shares of the redeeming fund, it is generally not possible to short shares of a mutual fund. The investor would pay NAV to purchase the shares and receive NAV upon redeeming the shares. Thus, it would be difficult to be able to compensate an investor doing an integrated contribution and redemption trade.

One possible candidate to carry out in-kind redemptions is an affiliated person of the mutual fund.²³⁵ An affiliate of a mutual fund, such as the sponsor, would not necessarily undertake the trade to directly profit, but rather to benefit the current and future shareholders. Under Section 17(a) of the 1940 Act, any affiliated person of an investment company is generally prohibited from purchasing from or selling to an investment company any security,²³⁶ unless the SEC approves an order exempting the transaction.²³⁷ In a 1999 no-action letter issued to the Signature Financial Group, the SEC interpreted Section 17(a) to encompass in-kind redemptions by affiliated persons but permitted them to be undertaken provided, inter alia, that the redemption in kind be carried out at a value equal to the shareholder's proportionate share of the fund's net assets using the same value as was used

²³⁴ SEC Liquidity Management, supra note 93, at 82210

 $^{^{235}}$ An affiliated person of an investment company includes any 5%-or-more shareholder (by vote), any person under common control, and any investment adviser. 15 U.S.C. \S 80a-2(a)(3).

²³⁶ 15 U.S.C. § 80a-17(a)(1)–(2).

 $^{^{237}}$ 15 U.S.C. \S 80a-17(b). The SEC has issued various exemptive orders permitting in-kind redemptions by affiliated persons. *See, e.g.*, GE Institutional Funds, SEC No-Action Letter, 2005 WL 3601654 (Dec. 21, 2005).

to compute the fund's NAV.²³⁸ Notably, the no-action letter did not require that any redemption be pro rata, but it noted that pro rata redemptions approved by the fund's board or adopted procedures would generally address concerns that underlie Section 17, such as distributing portfolio securities of limited availability or undervalued securities.²³⁹ These issues must now be addressed by all funds under the SEC liquidity risk program rules.²⁴⁰

B. Further Exploiting Section 852(b)(6)

By using the option to distribute low basis shares, realizing fund-level losses, and employing heartbeat trades, U.S. equity ETFs have largely eliminated any fund-level recognized gains. Furthermore, once Vanguard's patent expires, any mutual fund sponsor will be able to create a separate ETF share class in its mutual funds, which can then be used as a conduit to remove unrealized gains from the mutual funds when the ETF shares are redeemed. This will benefit both ETF and mutual fund shareholders. There is no evidence, other than silent inaction, that Congress intended Section 852(b)(6) to be exploited like this.

Since heartbeat trades have become commercially commonplace, creative tax advisors will eventually consider employing Section 852(b)(6) as a capital gains eliminator. One possible strategy would be to use an ETF to acquire securities or other property with a built-in gain in a tax-free transaction and then distribute them in redemption of a shareholder's interest. This would eliminate the gain in the securities or property and allow the new acquirer a fair market value basis in the securities or property, while the sellers could continue to defer any gains until a sale of the ETF shares.

Although such acquisitions can potentially be accomplished via tax-free reorganizations, special reorganization rules apply to investment companies, and regulatory limitations aimed at RICs acquiring property with built-in gain may also apply.

²³⁸ Signature Financial Group, SEC No-Action Letter, 1999 WL 1261284 (Dec. 28, 1999). The letter also required that the redemption be consistent with the fund's policies in the prospectus and statement of additional information and neither the affiliated shareholder nor any other party with the ability and pecuniary incentive to influence the redemption selects or influences the distributed securities. *Id.* at *7. Finally, the redemption must be approved by the fund's board, either after a finding that the affiliated shareholder will not be favored over any other shareholder and the redemption is in the best interest of the distributing fund or that it is undertaken pursuant to certain procedures adopted by the board. *Id.* at *7–*8.

 $^{^{239}}$ Id. at *5, *8 n.23.

²⁴⁰ 17 C.F.R. § 270.22e-4(b)(1)(v) (2021).

Furthermore, the diversification rules of Subchapter M and the 1940 Act may impose some limits on the ability of an investment company to acquire another company via a tax-free reorganization. These rules are sketched out below.

1. Reorganizations and ETFs

Assume that an owner of a C corporation that holds appreciated assets wishes to diversify her economic exposure but does not wish to sell the shares of the corporation or the underlying assets in a taxable sale. An ETF could acquire either the assets or shares of the corporation in a tax-free reorganization in exchange for shares of the ETF. The ETF could thereafter distribute the assets or shares via a heartbeat trade, and the acquirer would have a fair market value basis in the distributed property.

There are two basic methods for a corporation to acquire appreciated property tax-free: a transfer to a controlled corporation pursuant to Section 351 or an acquisition that constitutes a reorganization under Section 368.²⁴¹ To satisfy Section 351, the transferor(s) must be in control of the corporation immediately after the transfer, which requires the transferor(s) to own at least 80% of the voting shares and at least 80% of the total non-voting shares.²⁴² Consequently, it would be unlikely for a transfer to an ETF to satisfy Section 351, unless the transfer was made at formation or when the ETF was relatively small. Furthermore, since an ETF would be an investment company under Section 351,²⁴³ any transfer of property in exchange for shares would be taxable if the transfer results in diversification.²⁴⁴

 $^{^{241}}$ Another is via a distribution pursuant to Section 355, such as a split-off or spin-off.

²⁴² I.R.C. §§ 351(a) and 368(c) (defining control).

²⁴³ An investment company is a RIC, REIT, or a corporation more than 80% of whose assets are held for investment and are stock or securities or interests in RICs or REITs. Treas. Reg. § 1.351-1(c)(1)(i)-(ii). Other investments assets, such as options and foreign currency, are treated as stock and securities. *See* I.R.C. § 351(e)(1)(B). Section 721(b) incorporates these rules to partnerships.

 $^{^{244}}$ I.R.C. § 351(e). A transfer by two or more persons of nonidentical assets generally results in diversification. Treas. Reg. § 1.351-1(c)(5). A transfer by a single transferor generally does not result in diversification unless it is part of a plan to achieve diversification, such as a planned transfer of the securities received or corporate assets to an investment company. If the transferor transfers a diversified portfolio of stock and securities, as defined in Section 368(a)(2)(F)(ii), to a corporation, the transfer will not result in diversification. Treas. Reg. § 1.351-1(c)(6)(i).

Congress limits the use of RICs and other investment companies in corporate reorganizations.²⁴⁵ The primary goal of these provisions is to prevent investors from using the reorganization provisions to diversify investment assets without recognizing gain. These reorganization provisions parallel the investment company limitations of Sections 351(e) and 721(b).

An investment company, including an ETF or mutual fund, can generally be a party to a reorganization,²⁴⁶ provided that the target company is not an undiversified investment company.²⁴⁷ Thus, a RIC can be a party to a reorganization with another RIC, a REIT, a diversified investment company, or another corporation that is not an investment company, such as an operating company.

Satisfaction of the statutory reorganization requirements is not necessarily sufficient for a transaction to be treated as a reorganization. A transaction must also satisfy the business purpose test, and the continuity of shareholder interest and continuity of business enterprise requirements.²⁴⁸ Furthermore, a purported tax-free reorganization consisting of multiple steps could potentially be recast under the step transaction doctrine.²⁴⁹

If a RIC acquires property from a C corporation that is not an undiversified investment company in a reorganization, such as a merger or "C" reorganization, under Section 337(d) regulations, the RIC will be taxed on any net recognized built-in gains for five years following the acquisition of the property under the rules of

²⁴⁵ See I.R.C. § 368(a)(2)(F). For an acquisition of stock or assets to be tax-free for shareholders and corporations, it must fall under one of the statutory reorganization provisions in Sections 368(a)(1) and (2).

²⁴⁶ Under Section 368(a)(2)(F)(i), if two or more parties to purported reorganization are investment companies, the transaction is not a reorganization unless the companies are RICs, REITs, or diversified investment companies. An investment company is considered to be diversified if not more than 25% of the value of its total assets is invested in the stock and securities of any one issuer and not more than 50% of the value of its total assets is invested in the stock and securities of 5 or fewer issuers. I.R.C. § 368(a)(2)(F)(ii). For these purposes, cash and government securities are excluded. *Id.* § 368(a)(2)(F)(iv).

²⁴⁷ An investment company includes RICs, REITs, and any corporation 50% or more of the value of which consists of stock and securities and 80% or more of the value of whose total assets are assets held for investment. I.R.C. § 368(a)(2)(F)(iii). There is a look-through rule for subsidiaries, which are defined to be companies where the parent owns 50% or more of the vote and 50% of the value of the outstanding shares. *Id.* For these purposes, cash and government securities are excluded. *Id.* § 368(a)(2)(F)(iv).

²⁴⁸ Treas. Reg. § 1.368-1(b).

²⁴⁹ See, e.g., Rev. Rul. 72-405, 1972-2 C.B. 271 (forward triangular merger followed by liquidation is asset acquisition); and Rev. Rul. 67-274, 1967-2 C.B. 141 (stock acquisition followed by liquidation is treated as asset acquisition). Certain post-acquisition distributions are protected against recharacterization. See Treas. Reg. § 1.368-2(k).

Section 1374.²⁵⁰ These regulations, like Section 1374, generally aim to prevent RICs and REITs, which are passthrough entities, from being used to circumvent the repeal of *General Utilities* by the transfer of appreciated property from a C corporation to a RIC or REIT.²⁵¹

Net recognized built-in gain is any gain recognized for the five years following the acquisition of property from a C corporation, but only to the extent of any built-in gain at the time of acquisition. Each end any subsequent appreciation is not subject to Section 1374. Importantly, since Section 1374 only applies to recognized built-in gains, any realized gains that are not recognized under Section 852(b)(6) would not be subject to 1374. Consequently, any assets acquired by a RIC from a C corporation in a reorganization could still be distributed tax-free under Section 852(b)(6) to a redeeming shareholder without triggering the built-in gains tax of Section 1374.

2. Acquisitions and the Diversification Tests

If a RIC acquires stock or assets of a C corporation in a reorganization, the RIC must ensure that it does not run afoul of the gross income test of Subchapter M and the diversification requirements of Subchapter M and the 1940 Act. Under Section 851(b)(2), to qualify as a RIC, 90% of a corporation's gross income must be passive income, such as dividends, interest (both taxable and tax-exempt), and gains from the sale of stock and securities.²⁵⁴ Consequently, if a RIC holds operating assets directly, the gross income generated by those assets could not exceed 10% of the RIC's gross income. If the assets were held by a subsidiary,

 $^{^{250}}$ The regulations treat the acquisition of property by a RIC or REIT from a C corporation or the qualification of a C corporation as a RIC as a conversion transaction. Treas. Reg. \S 1.337(d)-7(a)(2)(ii). Once property of a C corporation becomes property of a RIC in a conversion transaction, it is subject to the rules of Section 1374. Treas. Reg. \S 1.337(d)-7(b)(1). These rules apply to net built-in gains recognized during the recognition period, which is the five-year period beginning on the date the RIC acquires the property. Treas. Reg. \S 1.337(d)-7(b)(2)(iii). These rules do not apply if the C corporation makes an election to treat the transfer to the RIC as a deemed sale of assets. See Treas. Reg. \S 1.337(d)-7(c).

 $^{^{251}}$ This regulation does not apply to the acquisition of stock of a C corporation, for example, in a B reorganization.

 $^{^{252}}$ I.R.C. §§ 1374(d)(1) (defining net unrealized built-in gain) and 1374(d)(3) (limiting recognized built-in gain to the gain at the beginning of the S corporation's first taxable year).

 $^{^{253}}$ Distributions that are related to the reorganization, however, could cause the reorganization to be reclassified under the step transaction doctrine.

 $^{^{254}}$ I.R.C. § 852(b)(2)(A). Also included are gains realized from foreign currencies, and derivatives based on stock or securities such as options, forwards, and futures. *Id.*

however, the RIC would be treated as holding stock, which would not count against the 90% test.²⁵⁵

Subchapter M imposes relatively loose diversification requirements. A RIC must satisfy two diversification tests, the 50% test and the 25% test, both of which are determined quarterly. The 50% test requires a RIC to have at least 50% of its assets invested in cash, Government securities, securities of other RICs, and other securities. In making this determination, however, the securities of any one issuer will not count to the extent that they exceed 5% of the RIC's total assets, or the RIC owns more than 10% of the outstanding voting securities of the issuer. Such securities thus count as part of a RIC's assets, but do not count towards the 50% threshold.

Under the 25% test, not more than 25% of a RIC's total assets can be invested in the securities of any one issuer, the securities of two of more issuers controlled by the RIC and engaged in the same trade or business, or the securities of one or more qualified publicly traded partnerships.²⁵⁹ Control of a corporation is ownership of 20% or more of the corporation's voting stock,²⁶⁰ and if a RIC owns 20% or more of a corporation, it is deemed to own its share of any securities in the same control group, which includes corporations connected by 20% voting ownership.²⁶¹

Thus, a RIC can also acquire and hold all of the shares of another corporation, provided that the value of the shares is less than 25% of the RIC's total assets and the RIC holds the requisite 50% of good assets. A RIC may acquire and hold assets, but the income they produce will not count towards the 90% gross income test, and the assets cannot constitute more than 50% of the RIC's assets.

²⁵⁵ Using a C corporation, including a foreign corporation, to block bad income is a common structuring technique for RICs and REITs. See Willard B. Taylor, "Blockers," "Stoppers," and the Entity Classification Rules, 64 TAX LAW. 1 (2010).

²⁵⁶ I.R.C. §§ 852(b)(3) and (d). Although the statutory requirements appear to be clear-cut, this is an area of some uncertainty. The treatment of swap positions, for example, is unclear. This is especially relevant for new ETFs that offer single stock exposure. See, e.g., Direxion Shares ETF Trust, Registration Statement (Form N-1A) (Feb. 17, 2022), https://perma.cc/45TY-ASZH. For a detailed discussion of the diversification requirement, see SUSAN A. JOHNSTON & JAMES R. BROWN, JR., TAXATION OF REGULATED INVESTMENT COMPANIES AND THEIR SHAREHOLDERS ¶ 2.07 (2021).

²⁵⁷ I.R.C. § 851(b)(3)(A)(ii).

²⁵⁸ I.R.C. § 851(b)(3)(A)(i)–(ii).

²⁵⁹ I.R.C. § 851(b)(3)(B)(i)–(iii).

²⁶⁰ I.R.C. § 851(c)(2).

²⁶¹ I.R.C. § 851(c)(1)–(3).

The 1940 Act also imposes diversification requirements on investment companies that are management companies²⁶² depending on whether they are diversified or non-diversified.²⁶³ To be diversified, a management company must ensure that at least 75% of its total assets are limited for any single issuer to an amount not greater than 5% of the value of the total assets of the management company and not more than 10% of the outstanding voting stock of the issuer.²⁶⁴ Thus, if the value of a single issuer exceeds 5% of the RICs assets or the RIC owns 10% or more of the issuer, those securities are excluded from being counted toward the 75% test. Since a diversified company can become non-diversified if a majority of its shareholders assent,²⁶⁵ these limits are not too binding.

C. Summary

This Part has sketched out some of the rules applicable to investment companies acquiring shares or assets of another company. Although investment companies must comply with additional tax and securities law requirements in M&A transactions, these rules are not insurmountable impediments. Given a target that is the appropriate size and a transaction that satisfies the business purposes, continuity of interest, and continuity of business enterprise requirements, an ETF could be used as an acquisition vehicle to ultimately give a third party a tax-free step up in basis in the shares or assets of an acquired company. The fact that this is possible should further encourage Congress to consider revising Subchapter M.

²⁶² The 1940 regulates "investment companies," including "management companies." 15 U.S.C. § 80a-3 (defines investment company); 15 U.S.C. § 80a-4 (classifies investment companies as either "face-amount certificate company", "unit investment trust", or "management company"). A management company is furthered classified as either an "openend" or "closed-end" company. 15 U.S.C. § 80a-5(a)(1)–(2).

²⁶³ 15 U.S.C. § 80a-5(b)(1)–(2).

²⁶⁴ 15 U.S.C. § 80a-5(b)(1).

²⁶⁵ 15 U.S.C. § 80a-13(a)(1). For an example of a request to shareholders to change from a diversified to non-diversified management company, see, e.g., Vanguard, Joint Special Meeting of Shareholders (Form DEF 14A) (Oct. 19, 2020), https://perma.cc/MF5U-KMF9. Among the reasons given for the change was that various indices tracked by these funds, e.g. the Russell 1000 Growth Index, had become concentrated in their top holdings, and the fund could no longer hold the underlying shares and still be considered diversified under the 1940 Act. Id. at 3, 4.

²⁶⁶ There are additional mechanisms for an ETF to acquire shares of a company taxfree, such as, for example, via a qualifying Section 355 spin-off or split-off. The ETF could then distribute the acquired shares tax free to a redeeming shareholder under Section 852(b)(6), and an acquiring shareholder would receive the shares with a fair market value basis.

X. SECTION 852(b)(6) SHOULD BE REFORMED

Through distributions of low basis stock, heartbeat trades, and capital structure arbitrage, Section 852(b)(6) has turned equity ETFs into capital gain deferral machines—no shareholder-level tax is incurred until the shares are sold. This significant tax benefit accounts for the meteoric rise in equity ETF assets over the last twenty years and has created a caste system for various investment vehicles, with ETFs on the top and mutual funds and individual investors on the bottom. Furthermore, investing via an ETF can be more tax advantageous than investing directly, since an ETF can make tax-free portfolio adjustments, but individual investors cannot.

Since Subchapter M often fails to match a shareholder's economic and taxable income and loss, taxable mutual fund shareholders can consequently be temporarily over-taxed or undertaxed. Although Section 852(b)(6) effectively eliminates temporary over-taxation of ETF shareholders, it allows ETFs to make tax-free portfolio adjustments and drives a wedge between the after-tax returns of ETF shareholders, mutual fund shareholders, and individual investors even though they are subject to the same economic exposure. This final Part explores various options to revise Section 852(b)(6).

A. Maintain the Status Quo

If Section 852(b)(6) is not amended, and the IRS does not limit tax-free heartbeat trades or capital structure arbitrage, it is certain that equity ETFs will continue to displace mutual funds and even displace direct investment by taxable investors.²⁶⁹ One

²⁶⁷ See infra Part III.

²⁶⁸ ETF shareholders can still benefit from fund-level capital losses, which can offset any recognized capital gains.

²⁶⁹ A new challenger to ETFs may be direct indexing, which is a custom basket of stocks assembled by a portfolio manager or advisor. This strategy allows an investor to assemble a diversified portfolio that is adjusted to reflect a particular investment strategy, such as ESG or certain factor exposures. Since the shares are owned directly by the investor, the investor can selectively realize losses and defer gains on individual securities, which may increase an investor's after-tax returns, even when compared with ETFs. See Ben Johnson & Susan Dziubinski, Should You Follow Vanguard Into Direct Indexing?, MORNINGSTAR (Aug. 9, 2021), https://perma.cc/NX5T-X83K. Direct investing generally requires a significant minimum investment and there are fees to acquire the portfolio, but Vanguard, Blackrock, and J.P. Morgan have purchased direct-investing firms, and the minimums and costs will certainly decline. See, e.g., Vanguard to offer direct indexing capabilities through acquisition of Just Invest, VANGUARD (Jul. 13, 2021), https://perma.cc/V7QD-L9WT. Even with direct investing, however, portfolio adjustments will generally be taxable.

could argue that ETFs remedy certain structural weaknesses of investment companies. For instance, they shift many fund costs, including taxation, to the shareholders who are responsible for generating them; ETFs also offer instantaneous liquidity and lower minimums than many mutual funds. One may view the growth of ETFs as just another step in the evolution of public investment companies. Similarly, in the 1930s, because of their structural advantages such as the absence of discounts and premiums to NAV, open-end mutual funds permanently displaced closed-end funds as the investment vehicle of choice.²⁷⁰

As ETFs continue to attract more assets, more taxable share-holders will benefit from the deferral of capital gains, and ETFs will be able to continue making unlimited tax-free portfolio adjustments. The benefit of deferring capital gains increases as an investor's gains increase. Thus, Section 852(b)(6) operates as an unjustifiable tax subsidy for wealthier investors.²⁷¹

Given the high likelihood that creative tax advisors will find new ways to exploit Section 852(b)(6), the status quo will not be tenable. A fundamental goal of Subchapter M is to roughly equalize the tax treatment of investing directly in publicly traded securities and investing indirectly via a RIC. The use of Section 852(b)(6) by ETFs heaps tax benefits on their shareholders and drives a wedge between the tax treatment of ETF shareholders and direct investors and mutual fund shareholders.

B. Repeal Section 852(b)(6)

Barring a wholesale revision of the taxation of public investment companies and their shareholders, an overhaul of Subchapter M, or the taxation of publicly traded assets, the simplest and soundest approach to address heartbeat trades, capital structure arbitrage, and the elimination of fund-level gains through the ETF creation and redemption process is to repeal Section 852(b)(6) and require ETFs, like all other corporations, to

 $^{^{270}}$ See Colon, Oil and Water, supra note 51, at 778–88. See generally Matthew P. Fink, the Rise of Mutual Funds (2008).

²⁷¹ Moussawi, *supra* note 12, at 33–35, 66 tbl. IX, has found an "overwhelming trend" of high-net-worth clients from 2000 through 2017 shifting into ETFs, especially after the 2012 increase in capital gains tax rates. Households owning ETFs also have significantly higher mean and median total assets, financial assets, and net worth than U.S. households generally. *See* INV. CO. INST. AND STRATEGIC BUS. INSIGHTS, A CLOSE LOOK AT ETF HOUSEHOLDS (Sept. 2018), https://perma.cc/58ZC-2CL6 (finding that ETF households' mean and median financial assets are \$1,006,100 and \$401,700 versus \$272,700 and \$37,700 for all households).

recognize gain on the distribution of appreciated property. This was the proposal put forth by Senator Wyden in 2021.²⁷²

Eliminating Section 852(b)(6) would remove the competitive tax advantage that ETFs have over mutual funds, direct investors, and investors in publicly traded partnerships. Since it would also apply to mutual funds, it would eliminate the benefit of heartbeat trades, whether carried out by a standalone ETF or an ETF that is part of a mutual fund, such as the current Vanguard ETFs. Additionally, the Joint Committee on Taxation has reportedly estimated that repeal of Section 852(b)(6) would raise significant tax revenue.²⁷³

Repealing Section 852(b)(6) could lessen the attractiveness of ETFs for *taxable* investors as redemptions using appreciated property that are currently tax-free at the fund level would have to be recognized and distributed to the fund's shareholders. It is important to emphasize that tax-exempt investors, such as pension plans, endowments, foreign investors, ETFs held in IRAs and Roth IRAs, and ETFs held by taxpayers subject to mark-to-market tax accounting would not be affected by this proposal. A fair question is whether repeal of Section 852(b)(6) would make ETFs prohibitively tax inefficient for taxable investors. The answer is an emphatic no.

Since a manager will have the option to select which securities to distribute, the ETF manager can control the gain recognized on in-kind redemptions; she can distribute high basis securities if she does not want to recognize gain or low basis securities if she wishes to recognize gain. A manager might wish to recognize gain if the fund has recognized losses to offset the gains or the manager wishes to reduce any fund overhang. Conversely, a fund manager can selectively realize losses and use those losses against current or future gains. A mutual fund manager must make similar decisions when a fund has net redemptions, and the manager must choose which positions to sell. The mutual fund manager must also decide whether to engage in tax loss harvesting to accumulate losses that can be used against future gains.

Furthermore, the amount of gain that can be recognized on in-kind distributions is limited by the total unrecognized gains in

 $^{^{272}}$ Staff of S. Finance Comm., 117th Cong., Discussion Draft on Wyden Passthrough Reform, Section by Section Summary (Sept. 10, 2021), https://perma.cc/JTE5-GS2S.

 $^{^{273}}$ The Joint Committee on Taxation has reportedly estimated that repeal of Section 852(b)(6) would raise \$200 billion over the next ten years. See Lim & Rubin, supra note 24.

a fund's portfolio of securities. To the extent that the overall returns in the market or the portion of the market tracked by an ETF are flat or negative, a fund may have little or no gains. If a fund's returns are volatile and there are continual contributions and redemptions, a manager will have more opportunity to distribute securities with little or no gain since the securities that were purchased when the market was higher can be distributed when the market has moved lower.

If, however, a fund manager defers gains by distributing high basis securities, and the overall returns of the fund have been positive, overhang may increase, making it more likely that gains will be recognized on future in-kind distributions. As can occur with mutual funds, taxable shareholders could be taxed on gains that arose before they purchased their shares. This could temporarily increase the disconnect between a taxable shareholder's economic returns and taxable returns. In such a case, it may be better for individual, long-term taxable investors to consider migrating away from ETFs and instead invest in mutual funds or direct indexing.

For investors whose income level permits them to invest in an IRA or Roth IRA, the optimal move may be to invest in ETFs through these tax-favored investment vehicles or through their 401(k) plan.²⁷⁴ This advice is typically given to investors that hold less tax-efficient investments, such as bonds, including Treasury Inflation-Protected Securities.²⁷⁵ Those taxable investors that value the ability to trade diversified portfolios continuously could opt to invest in less tax-efficient ETFs if the continuous liquidity option outweighed the possible negative tax consequences.²⁷⁶

 $^{^{274}\,}$ In 2021, a single individual can contribute up to \$6,000 annually to an IRA or Roth IRA. If the person is 50 or over, the annual limit is \$7,000. Once the individual's modified adjusted income (MAGI) is over \$125,000, the maximum contribution is phased out and is \$0 once MAGI is \$140,000 or greater. For married persons filing jointly, the MAGI limitation is \$198,000, and is phased out completely at \$208,000. Thus, a married couple could contribute annually up to \$12,000. See I.R.C. §§ 219 (IRA limitation) and 408A (Roth IRA limitation). For a participant to invest in an ETF via a 401(k), the retirement plan would have to offer a brokerage option.

²⁷⁵ The finance literature has addressed this issue in great detail. See, e.g., Daniel Bergstresser and James M. Poterba, Asset Allocation and Asset Location: Household Evidence from the Survey of Consumer Finances, 88 J. of Pub. Econ. 1893 (2004) and Robert Dammon, Chester S. Spatt, and Harold H. Zhang, Optimal Asset Location and Allocation with Taxable and Tax-Deferred Investing, 59 J. of Fin. 999 (2004). Recent entrants into the automatic investment advisor space, such as Betterment, also stress the importance of tax-efficient asset location. See Boris Khentov, Rukun Vaidya, and Lisa Huang, Asset Location Methodology, BETTERMENT (Sept. 26, 2016) https://perma.cc/6TFL-AS6R.

 $^{^{276}}$ ETFs held by a trader fund that has made the mark-to-market election under Section 475(f) would recognize ordinary gain or loss on any ETF position held at the end of

It is important to emphasize that eliminating Section 852(b)(6) would not lessen the attractiveness of ETFs for tax-exempt investors, such as foreigner investors, pension plans, endowments, sovereign wealth funds, and retirement plans such as IRAs and 401(k) plans. Although this is ultimately an empirical question, given that foreigners, nonprofits, and retirement plans own 75% of U.S. corporate stock, there should still be more than sufficient investor demand for ETFs to continue to be a viable investment vehicle.²⁷⁷

If Section 852(b)(6) is repealed, the treatment of realized losses on in-kind distributions should be revisited. Currently, a corporation cannot recognize a loss when distributing property as either a dividend or in redemption of its shares.²⁷⁸ It can only recognize a loss when the property is distributed in complete liquidation.²⁷⁹

It is not clear why Congress, when it repealed the last vestiges of the *General Utilities* doctrine in 1986, did not permit corporations to recognize losses on the distribution of property. One possible reason is the concern that a corporation could manipulate the price of the distributed property. This concern is not relevant for in-kind distributions by RICs because the value of the distributed securities is known. It may therefore be appropriate for Congress to allow realized losses to be recognized on the distribution of property by RICs and treat such losses similarly to recognized capital losses.

Taxing in-kind distributions of appreciated property is not necessarily inconsistent with Subchapter M, which implements conduit taxation by treating RICs as taxable entities but permits distributions to be fully deductible. One consequence to taxing in-kind distributions of appreciated property is that if a fund recognized additional gains from in-kind redemptions, it would have to distribute additional dividends to avoid entity-level tax.

One concern is whether taxing in-kind distributions could lead to a capital-depleting cascade. Since a RIC must distribute

the year. See I.R.C. \S 475(f). If a distribution were made at year end, the NAV of the fund would drop by the amount of the distribution and thus any dividend income would be offset by the reduced gain or increased loss of the value of the ETF.

²⁷⁷ Steven M. Rosenthal and Theo Burke, *Who Owns US Stock? Foreigners and Rich Americans*, TAX POL'Y CTR. (Oct. 20, 2020), https://perma.cc/SC45-785E (finding that in 2019, tax-exempt investors, including foreigners, own 75% of U.S. corporate stock).

²⁷⁸ I.R.C. § 311(a)(2).

 $^{^{279}}$ I.R.C. \S 336(a). The ability to recognize a loss in a liquidation is subject to various limitations. See I.R.C. \S 336(d).

²⁸⁰ BITTKER & EUSTICE, supra note 160, at ¶ 8.21[2] (7th ed. 2021).

its investment income and net capital gains to avoid entity-level tax, a fund that recognized gains on in-kind distributions would be required to increase its distributions to avoid entity-level taxation. To ensure that it has sufficient cash to distribute at year end, a fund may have to either sell assets or borrow. These sales could generate additional gains, which in turn would require additional dividends to be paid to avoid entity-level taxation, which could force additional sales of assets, and so forth. A combination of taxable redemptions and asset sales could result in a fund's capital being depleted.

For various reasons, this scenario is unlikely. If distributions of appreciated property were taxable, a manager could distribute high-basis assets to avoid recognizing gains or low-basis assets to increase gains recognized. Similarly, if a fund needed to sell assets to generate cash, the manager could sell high-basis assets to reduce gains recognized or generate losses or sell low-basis assets to recognize gains. In the face of significant redemptions, a mutual fund manager faces these same decisions. Finally, if a fund experiences significant redemptions, it could be because of poor fund performance or a general market downturn. In either case, the fund is unlikely to own significantly appreciated assets.

A related justification that has been put forth by regulators is that the in-kind redemption rule for mutual funds functions as a sort of relief valve that protects a fund from having to sell assets at "fire sale" prices when faced with significant redemptions.281 Here the focus may not be that such sales would generate taxable gains that could in turn require additional sales of assets, but that forced sales of assets at low prices could cause harm to remaining shareholders. This rationale implicitly assumes that shareholders will not have to sell the distributed assets at the same "fire sale" prices or are better at managing asset sales than fund managers. There does not seem to be any evidence of this relief valve being used in a material way. As evidence of this argument's weakness, when Russia invaded Ukraine on February 24, 2022, many exchanges halted trading of Russian securities. The author is not aware of a single instance where a fund distributed Russian securities or ADRs in kind in perhaps one of the greatest fire sale moments in the 21st century.

²⁸¹ Michael S. Piwowar, Comm'r, SEC, Remarks at the 2015 Mutual Funds and Investment Management Conference (Mar. 16, 2015). *See also* SEC Liquidity Management, *supra* note 93, at 82210 ("[M]ost funds often consider redemptions in kind to be a last resort or emergency measure")

In-kind distributions of assets, however, raise additional issues both for redeeming and remaining shareholders. An in-kind distribution paid to a large redeeming institutional shareholder may benefit remaining shareholders because the cost of selling the shares can be shifted to the redeeming shareholder.²⁸² On the other hand, if a fund's in-kind distribution does not consist of a pro rata selection of the fund's assets, remaining shareholders could be harmed if the remaining assets are less liquid or more risky.²⁸³ The SEC now requires open-end funds that reserve the right to redeem in kind and in-kind ETFs to "establish policies and procedures regarding how and when [they] will engage in such redemptions in kind."²⁸⁴

A significant market decline could cause mutual fund shareholders to request redemptions en masse, which could force a manager to sell assets and thereby generate gains. This, in turn, would require a fund to increase its distributions, and a fund could see its capital decline precisely at the moment that it could be the most valuable as asset prices have declined.²⁸⁵ This scenario arose in the financial crisis of 2008 and the recent COVID-19 pandemic in 2020, and both the SEC²⁸⁶ and IRS promulgated measures to help funds protect their capital.

²⁸² Letter from Barbara Novick, Vice Chairman, Blackrock, to Brent Fields, Sec'y, SEC, at 11 (Jan. 13, 2016), https://perma.cc/5ZJ6-PEQD.

²⁸³ For a detailed disclosure of some of the potential hardships that could befall shareholders who are redeemed in kind, see, e.g., DODGE & COX, DODGE & COX FUNDS PROSPECTUS 52 (May 1, 2020), https://perma.cc/S8QH-TZSX. Managers of open-end funds confront the same issue when making cash redemptions and deciding which assets to sell. See SEC Liquidity Management, supra note 93, at 82150. Since money market funds are considered by investors to be cash equivalents, and value impairments such as "breaking the buck" could cause substantial harm to the financial system, the SEC has promulgated rules that permit money market funds to make in-kind redemptions, suspend redemptions during emergencies, and impose liquidity fees if the percentage of liquid assets falls below a specified minimum. See., e.g., VANGUARD, VANGUARD MONEY MARKET FUNDS PROSPECTUS 39–40 (Dec. 17, 2021), https://perma.cc/BG5F-XQE8.

²⁸⁴ 17 C.F.R. § 270.22e-4.

²⁸⁵ If a fund earns taxable income without a corresponding amount of cash, which can occur when the fund invests in debt instruments that generate a significant original issue discount, a fund could have to liquidate assets to generate the cash to satisfy the distribution requirement or be forced to borrow. In the throes of a financial crisis, borrowing can be impossible, and a fund would therefore have to sell assets to generate the cash to satisfy the distribution requirement. Sales of assets during a financial crisis could exacerbate the crisis.

²⁸⁶ The SEC issued an order on March 23, 2020, that permits funds to borrow from the firm that manages the portfolio and from other funds in the same family. Order Under Sections 6(c), 12(d)(1)(J), 17(b), 17(d) and 38(a) of the Investment Company Act of 1940 and Rule 17d-1 Thereunder Granting Exemptions from Specified Provisions of the Investment Company Act and Certain Rules Thereunder, Investment Company Act Release No. 33821, 85 Fed. Reg. 17374 (Mar. 23, 2020).

Via a series of revenue procedures, the IRS has permitted a RIC to make distributions payable in stock, cash, or some combination thereof, which enables the RIC to avoid distributing cash to satisfy the minimum distribution requirements and avoid entity-level taxation.²⁸⁷

Under Revenue Procedure 2021-53,²⁸⁸ a RIC may treat a distribution that is payable, at the election of each shareholder, in either additional stock or cash as a taxable distribution in its entirety, even though the maximum amount that can be distributed to all shareholders is 10% of the total distribution.²⁸⁹ To qualify, a RIC must offer to distribute in cash at least 10% of the total distribution.²⁹⁰ Since the distribution is taxable in its entirety regardless of the cash elected to be received,²⁹¹ the RIC can satisfy the 90% investment income distribution requirement and

²⁸⁷ Rev. Proc. 2009-15, 2009-4 I.R.B. 356 (effective for distributions declared on or after Jan. 1, 2008). Rev. Proc. 2010-12, 2010-3 I.R.B. 302 extended these provisions to cover distributions declared on or before Dec. 31, 2012. The IRS had earlier extended this treatment to REITs. See Rev. Proc. 2008-68, 2008-52 I.R.B. 1373. Once the prior revenue procedures were no longer effective, taxpayers requested private letter rulings to receive the desired treatment. To obviate the need for requesting a ruling, the IRS issued Rev. Proc. 2017-45, 2017 I.R.B. 216, effective for distributions declared on or after Aug. 11, 2017

 $^{^{288}}$ Rev. Proc. 2021-53, 2021-51 I.R.B. 887 is effective for distributions on or after November 1, 2021, and on or before June 30, 2022. It followed Rev. Proc. 2020-19, 2020-22 I.R.B. 87, which was effective for distributions on or after Apr. 1, 2020, and on or before Dec. 31, 2020.

²⁸⁹ Although stock dividends are generally not taxable under Section 305(a), because of the option to receive cash or stock the stock dividend would be treated as a distribution of property under Section 301. I.R.C. § 305(b)(1).

²⁹⁰ Rev. Proc. 2021-53, 2021-51 I.R.B. 887 § 3. Under Rev. Proc. 2017-45, the cash limitation percentage was 20%. One commentator has suggested that the original 20% number was approximately equal to the taxes due on the entire distribution using a federal rate of 15% and a state rate of 5%. Using the highest rate for capital gains under current law, 23.8%, for the federal tax rate and 5% for the state rate, if a taxpayer received 10% of the distribution in cash, the 10% cash distribution could be significantly less than the tax due on the entire distribution. Presumably, such taxpayers would satisfy their tax obligations out of other funds. Richard W. Bailine, *A Rare and Valuable Look at Section 305*, 35 J. CORP. TAX'N 28, 29 (Nov./Dec, 2008). For RICs, given that 90% or more of RIC shareholders typically elect to reinvest their distributions in additional stock and therefore pay the tax out of other funds, the concern that a taxpayer would not have sufficient cash to satisfy their tax obligations is minor.

²⁹¹ Under Section 305(b)(1), if a distribution is payable in stock or cash, the entire distribution is taxable. Since it is possible that a particular shareholder can receive the entire distribution in cash, the distribution is therefore taxable in its entirety, even though the RIC will distribute a maximum of only 10% of the total distribution in cash. In contrast, if the RIC distributed a dividend consisting of 10% in cash and 90% in stock, the stock portion would not be taxable. See Treas. Reg. § 1.305-1(b), Ex. 1 (dividend of two shares for each share owned where shareholder could elect to receive cash for one share is a taxable dividend only to the extent of one share; the distribution of the other share is a non-taxable distribution under Section 305(a)).

eliminate entity-level tax on its investment income and net capital gains by distributing in cash only 10% of its investment income and net capital gains.²⁹²

These revenue procedures offer a mechanism by which a fund could mitigate the potential capital depleting effects of significant fund-level gains: the fund could pay the required dividend distributions as stock dividends with a shareholder-level election to take a portion of the dividends in the form of cash.²⁹³ A fund would thus not have to sell additional assets to pay distributions.

A potential objection is that the cash received by a shareholder would be insufficient to pay his federal and state tax obligations. This should not be a concern for a few reasons. The amount of the shortfall will depend on the character of a fund's income. If the fund's income consists solely of ordinary income or short-term capital gains, the federal top rate could be as high as 40.8%, or 23.8% in the case of net capital gains.²⁹⁴ Almost all RIC shareholders reinvest their dividends, so any taxes due on RIC distributions are generally paid out of other funds.²⁹⁵ It could be that if redemptions with appreciated property were taxable, fund taxable income could increase, and consequently, more shareholders could conceivably need more cash to satisfy their annual tax obligations. Again, this should not be a concern because if a taxable fund shareholder needed more cash, he could redeem or sell additional shares received in the distribution. The sale or redemption would not trigger any additional tax liabilities because the shares would have a basis equal to their fair market value at the time of distribution. 296

 $^{^{292}}$ For instance, if a fund offered to distribute a total amount of cash equal to 10% of the dividend and all shareholders elect to receive cash, each shareholder would receive 10% cash and 90% stock, but the shareholder would have a taxable inclusion of 100%. See Rev. Proc. 2009-15, 2009-4 I.R.B. 356 \S 4(b).

²⁹³ Although the minimum cash amount has varied between 10% and 20% in the revenue procedures, under the IRS's interpretation of Section 305(b)(2) and the accompanying regulations, it appears that there is no minimum cash amount required in order to have the cash and stock distribution treated as a taxable distribution in its entirety.

 $^{^{294}}$ 40.8% is the sum of the highest federal rate on ordinary income including short-term capital gains, 37%, and the 3.8% tax on net investment income under Section 1411. The highest rate on net capital gains, 20%, plus the 3.8% tax on investment income, yields 23.8%.

 $^{^{295}}$ Over 90% of the total dividends paid by all mutual funds are reinvested. Factbook, supra note 1, at 238 tbl. 29.

 $^{^{296}}$ Treas. Reg. § 1.305-1(b)(2) (stock received by RIC shareholder with election to receive cash or stock is equal to amount of cash that could have been received); Treas. Reg. § 1.301-1(h)(1) (basis of property received in a Section 301 distribution is its fair market value).

Repealing Section 852(b)(6) would eliminate the tax advantage of ETFs over mutual funds and individual investors. Depending how ETF managers manage fund tax liabilities, ETFs could become less tax-efficient and less attractive investment vehicles for long-term taxable investors. Such investors may therefore be advised to migrate to mutual funds or direct indexing. Given the substantial holdings of U.S. securities of tax-exempt investors, however, there should be sufficient demand for ETF shares that would permit APs to maintain the market price-NAV parity of ETF shares.

For those investors that use ETFs as part of active trading strategies, the repeal of Section 852(b)(6) may not adversely affect them because they may be able to trade around any ETF distributions; if their tax burdens increase, it may just be part of the cost of intraday liquidity.

C. Maintain but Modify Section 852(b)(6)

If Congress considers the costs of a full repeal of Section 852(b)(6) to outweigh the benefits, another approach would be to retain Section 852(b)(6) but limit its scope to prevent more extreme abuses, such as heartbeat trades and capital structure arbitrage. In private letter rulings, the IRS has permitted closedend funds to benefit from Section 852(b)(6), but these rulings have imposed extra-statutory requirements on the distributions.²⁹⁷ In particular, to benefit from Section 852(b)(6), the IRS has required closed-end funds to distribute a pro rata share of each of the securities held by the funds with certain exceptions.²⁹⁸ Furthermore, the rulings require that a fund distribute securities that have an aggregate basis as a proportion of the fund's aggregate tax basis that is no more than 1 percentage point lower than the percentage of the assets being distributed.²⁹⁹

 $^{^{297}}$ See, e.g., I.R.S. Priv. Ltr. Rul. 2003-34-1014 (Jul. 1, 2003). The IRS has issued six rulings to closed-end funds seeking to use Section 852(b)(6) in connection with self-tender offers. See JOHNSTON & BROWN, supra note 256, at ¶ 3.06[2][c] n.704. Since closed-end funds do not issue redeemable securities, in the absence of a letter ruling, in-kind redemptions using appreciated securities would not be exempt under Section 852(b)(6) and would be taxable under Section 311(b).

²⁹⁸ The letter rulings typically contain a representation that the fund will distribute a pro rata share of each security excluding: (a) unregistered securities, (b) foreign securities that cannot be held by non-nationals, (c) derivative contracts, (d) cash or cash equivalents, (e) fractional shares, and (f) cash distributions for fractional shares and odd lots. *Id*

²⁹⁹ Id.

Modifying Section 852(b)(6) to limit it solely to proportionate distributions would ensure that distributions of custom portfolios in heartbeat trades would be taxable, but ordinary pro rata redemption distributions would continue to be tax-free. In essence, when an ETF changes its portfolio by making non-proportional distributions, the distribution would be taxable in its entirety. The distribution exceptions in the letter rulings should not apply to prevent gains from being recognized, even if certain assets are not distributed. Although it may not be possible to distribute, for example, derivative contracts or unregistered securities, a fund should have to recognize gain on a proportional amount of any undistributed property to prevent avoidance of the proportional distribution requirement by investing in derivatives instead of holding the underlying securities.³⁰⁰

However, adoption of the requirement that puts a floor on the amount of basis of securities that would have to be distributed would not prevent an ETF from continuing to be able to reduce fund-level gains tax free. Even if the ETF had to distribute a minimum amount of basis each time it distributed securities, each redemption could take with it a proportionate amount of the fund's remaining gains. In the case of an ETF with a significant number of sizable redemptions during the year, a manager could distribute low-basis securities and reduce a fund's built-in gains without changing the portfolio.

Assume, for instance, a fund has an aggregate basis of \$100 in its securities and distributes 5% of its securities in redemption of its shares. Under the approach of the closed-end private letter rulings, the basis of the distributed securities could be no less than 4% of \$100, or \$4. This puts a floor on the basis of the distributed securities, which ensures that a distribution can, roughly, only remove a proportionate amount of unrealized gain from the fund. But this limitation would not prevent redemptions from removing built-in gains tax free.

Assume that in the above example, the ETF's securities (basis of \$100) have a FMV of \$200, and the fund has \$100 of builting gain. If an AP redeemed 10% of the ETF's shares, and the ETF distributed securities with a FMV of \$20 (10% of \$200) and a basis of \$10 (10% of \$100), the ETF would hold securities with built-in

³⁰⁰ Since all of an ETF's assets are marked to market daily in computing NAV, the value of the undistributed assets is known. If there is a need to draft exceptions, for example, for distributions of cash, these exceptions should be narrowly drafted to prevent a fund from changing its portfolio composition without the recognition of gain.

gain of \$90 (\$180 FMV - \$90 basis) or 10% less than the original built-in gain.³⁰¹

Now assume that an AP contributed securities worth \$180 and a basis of \$180. AUM would increase to \$360 (\$180 + \$180), total inside basis would be \$270 (\$90 + \$180), but built-in gains would remain at \$90 (\$360 - \$270). A short time later with NAV unchanged, an AP redeems \$180 of shares, and the manager distributes \$180 of the securities with a basis of \$135 (50% of \$270), leaving the ETF with securities with a built-in gain of \$45 (\$180 - \$135). Thus, with no change in NAV, the \$180 contribution and distribution would permit the ETF to remove 50% of the built-in gain for the remaining shareholders.

This example illustrates that even adopting a rule that mandates that an ETF distribute securities with a basis at least equal to the proportion of the securities distributed would not prevent an ETF from being able to reduce built-in gain. Although the pro rata distribution requirement would limit an ETF's ability to make tax-free portfolio adjustments employing heartbeat trades,³⁰² each distribution could remove tax-free a proportionate amount of unrealized gain.³⁰³

Another approach that could be employed in connection with the proportional distribution requirement is to require funds that distribute appreciated property to reduce the basis of their remaining appreciated securities by any realized but unrecognized gain in proportion to the basis of the remaining securities.³⁰⁴ This would allow a manager to distribute securities with a high basis, low basis, or any combination thereof without recognizing gain as under current law, but it would ensure that any unrecognized gains would be retained at the fund level. Reducing the basis in the remaining securities by the unrecognized gains of distributed securities would allow a fund to continue to make tax-free

 $^{^{301}}$ If the manager distributed securities with a basis of \$20, for example, the built-in gain would remain at \$100 (\$180 – \$80).

³⁰² If Congress opted to pursue this approach, it would be vital to ensure that any exceptions to the pro rata distribution requirement would be drafted narrowly. One idea would be to require an ETF to mark-to-market a pro rata portion of any position that was not distributed.

³⁰³ In this example, the AP contributed \$180 of basis and then removed \$135 of basis, which reduced built-in gain by \$45.

³⁰⁴ Professor Hodaszy, Section 852(b)(6) Tax Avoidance, supra note 26, at 537, 599–605, and Section 852(b)(6) Loophole, supra note 26, at 74–86, has advocated such an approach. He models his proposal on Section 362(c), which addresses the treatment of non-shareholder contributions to capital. Section 362(c) requires a corporation to take a zero basis in the contributed property and to reduce the basis of the corporation's property by the contributed cash. I.R.C. § 362(c)(2).

portfolio adjustments and defer realized gains at the fund level, but the author of this proposal states that the gains would eventually be recognized when the remaining securities are sold or exchanged in a taxable transaction, for example, in a rebalancing trade.³⁰⁵ If there is insufficient basis in the remaining securities, any realized gain in excess of the remaining basis would apparently disappear.³⁰⁶

Without addressing heartbeat trades, however, it is highly doubtful whether an ETF would ever recognize the deferred gain in a taxable sale.³⁰⁷ Furthermore, there does not seem to be a viable policy rationale against requiring an ETF to recognize gain if reducing the adjusted basis of the remaining securities by the unrealized gain would reduce the basis of the remaining securities below zero. If no gain is recognized when an asset's basis drops below zero, this proposal would not serve the goal of maintaining unrecognized gains at the fund level—those gains would disappear—and would effectively maintain the status quo of equity ETFs never recognizing any capital gains.

To the extent that gains are eventually recognized either upon a sale of securities or when an asset's basis falls below zero, this proposal could exacerbate the overhang problem if a manager were to only distribute high basis securities leaving low basis securities and greater built-in gain in a fund. Since gains would be deferred, it could further drive a wedge between a taxable shareholder's taxable income and her economic income. Finally, as an ETF's overhang increases significantly, taxable shareholders may avoid purchasing shares of the ETF.

D. Applying Principles of Subchapter K to RICs

Eliminating or amending Section 852(b)(6) to limit its scope leaves intact the basic structure of Subchapter M. Although repeal of Section 852(b)(6) may be the best tax policy alternative as it would treat distributions of publicly traded and easy to value securities identically to the sale of securities followed by a distribution of cash, such a change could make ETFs less tax-efficient

³⁰⁵ Hodaszy, Section 852(b)(6) Tax Avoidance, supra note 26, at 602–603.

³⁰⁶ *Id.* at 604 n.296. Professor Hodaszy does not state how unrecognized losses on distributed securities should be treated. If the goal is to preserve all unrecognized gains or losses at the fund level, the basis of the remaining securities should arguably be increased by unrecognized losses. Also, Professor Hodaszy does not detail how the basis reduction rule would work for such assets as cash and derivatives.

³⁰⁷ Professor Hodaszy has subsequently recognized this. *See* Hodaszy, *Section* 852(b)(6) Loophole, supra note 26, at 81 (recognizing that the "abusive practice of heartbeat trades would need to be shut down, for the basis-reduction rule to work").

for taxable investors and potentially limit the growth of ETFs. Congress could decide that repeal of Section 852(b)(6) is not the best path forward.

Less sweeping alternatives, such as limiting Section 852(b)(6) to proportional distributions and requiring funds to reduce basis by unrecognized gains, would eliminate the advantages of heartbeat trades and eventually require funds to recognize gains that escape tax under Section 852(b)(6). These alternatives, however, would permit an ETF to continue to defer gains until either it sells appreciated securities or has used up all of the basis in a security. An ETF's overhang could therefore become quite significant if an ETF manager opted to not sell appreciated positions, which could cause taxable investors to avoid investing in the ETF.

Another potential path that has been suggested is to revise Subchapter M to incorporate certain partnership principles that may better match taxable income or loss of the entity to the owners who have economically benefitted from the income or borne the losses than the principles embodied in current Subchapter M.³⁰⁸ Hedge funds, many of which have AUM in the billions and execute millions of trades annually, and certain partnerships, including ETFs that are eligible to be treated as publicly traded partnerships, already follow many of these rules, although these ETFs adopt certain modifications that aim to reduce administrative complexity.³⁰⁹

The basic goals of such a regime should be to match an owner's economic and taxable gains and losses and to prevent tax-free portfolio adjustments by the underlying investment entity. A detailed discussion of these rules is beyond the scope of this article, but the following discussion highlights their basic operation and some of the administrative challenges that adopting these provisions would raise.³¹⁰

³⁰⁸ See Colon, supra note 26, at 49–66 and Stephen D. Fisher, RICs and the Retail Investor: A Marriage of Convenience or Necessity?, 66 TAX LAW. 331, 388 (2013).

³⁰⁹ See, e.g., Invesco DB Multi-Sector Commodity Trust and Invesco DB Agriculture Fund, Prospectus Supplement No. 1, 75–88 (Aug. 27, 2021) [hereinafter Invesco Trust Prospectus] (describing U.S. tax consequences to investing in fund and the special rules for publicly traded partnerships). RICs that primarily hold stocks and securities are currently not eligible to be taxed as partnerships. I.R.C. § 7704(c)(3) (providing that qualifying income exception is not available to any partnership that would be a RIC if it were a U.S. corporation).

³¹⁰ For a detailed discussion of how these rules are implemented and modified by natural resources publicly traded partnerships, see Deborah Fields, Holly Belanger, Robert Swiech, and Eric Lee, Triangles in a World of Squares: A Primer on Significant U.S. Federal Income Tax Issues for Natural Resources Publicly Traded Partnerships (Part I), TAXES, Dec. 2009; Deborah Fields, Holly Belanger, and Eric Lee, Triangles in a World of

Under Subchapter M, overhang is created when a fund has unrealized gains, and a shareholder enters the fund by acquiring fund shares at NAV. The tax policy concern raised by overhang is that when the gains are realized and ultimately taxed to the yearend shareholders, those shareholders are not necessarily the shareholders who have benefited from the economic gains.³¹¹ To prevent the shifting of gains and losses among partners, Subchapter K requires partnerships to maintain an individual capital account for each partner and credit that account with economic gains and losses upon the occurrence of certain events or the passage of time.³¹² When those economic gains or losses are realized for tax purposes, the tax gains or losses are allocated to the partners who have been allocated the economic gains and losses.³¹³

To prevent a partner who purchases her interest in the partnership from another partner from being taxed on the economic gains of other partners, the partnership can treat the purchasing partner as if she purchased a pro-rata share of each partnership asset.³¹⁴ In essence, this gives her a FMV basis in each asset, and when those assets are sold, she is taxed only on her share of the

Squares: A Primer on Significant U.S. Federal Income Tax Issues for Natural Resources Publicly Traded Partnerships (Part III—Bringing in the Public and Management and Partnership Allocations), TAXES, May 2010; Deborah Fields, Holly Belanger, and Eric Lee, Triangles in a World of Squares: A Primer on Significant U.S. Federal Income Tax Issues for Natural Resources Publicly Traded Partnerships (Part IV—Secondary Offerings and the Impact of Public Trading), TAXES, Oct. 2010. See also Colon, supra note 26, at 49–66.

312 Treas. Reg. § 1.704-1(b)(2)(iv)(f)(5)(v)(i)-(ii) (describing situations in which is it permissible to adjust capital accounts, such as the contribution of property or money, the liquidation of a partner's interest, or the distribution of property or money to a retiring or continuing partner). Certain partnerships that hold publicly traded stock and securities, such as hedge funds, are allowed to adjust capital accounts in the absence of these events. These adjustments are referred to as reverse 704(c) allocations. Publicly traded partnerships often adopt certain conventions to mitigate the complexity of making these adjustments. See, e.g., Invesco Trust Prospectus, supra note 9, at 79–80 (describing monthly

ments. See, e.g., Invesco Trust Prospectus, supra note 9, at 79–80 (describing monthly reverse 704(c) convention and basing revaluations not on FMV of the assets, as required by regulations, but the average price of the shares during the month in which a creation or redemption takes place).

 313 For a discussion of some of the issues that arise in making reverse 704(c) adjustments, see Colon, supra note 26, at 53–57 and the sources cited therein. Some commentators have noted that issues can also arise regarding when exactly income is earned by a fund. See Yale, supra note 16 at 438. When a partner contributes property with a built-in gain to the partnership, the partnership is required to allocate that pre-contribution gain to the contributing partner when it is realized or the property is distributed to another partner within seven years. I.R.C. § 704(c)(1)(A) and (B).

314 I.R.C. § 743(b). To make such adjustments, the partnership would have to have made an election under Section 754. Publicly traded partnerships generally make this election. See, e.g., Invesco Trust Prospectus, supra note 3099, at 80 (describing Section 754 election and consequences under Section 743 and noting that fund applies certain conventions to reduce complexity of calculations and administrative costs). gain or loss that accrues after she purchases her interest. When that partner in turn sells her interest, she will recognize gain or loss, and her share of any of the partnership's unrealized gain or loss disappears.³¹⁵ This approach would mitigate the problem of overhang that currently occurs under Subchapter M.

One potentially significant impediment to implementing such a regime is that it is necessary for the entity to know each owner's transactions in the shares of the entity. In the United States, many publicly traded ownership interests are not held directly, but are in the name of brokers or other third parties.³¹⁶ Without such information, it is not possible to make Section 743 type basis adjustments.

Under Subchapter M currently, a RIC determines its investment company income and net capital gains yearly. The shareholders of record when these amounts are distributed are taxed on these amounts. The distributed capital gains may represent earnings that accrued in prior years, and the shareholders receiving capital gains distributions may not have benefited from them. This treatment follows the basic rules for corporate distributions.

However, publicly traded partnerships generally follow the partnership rules with certain modifications. They determine taxable income and loss monthly and allocate it among the shareholders in proportion to the number of shares owned at the *previous* month's end.³¹⁷

In considering whether to adopt Subchapter K principles for RICs, Congress would have to address the treatment of distributions for redeeming shareholders. When a partnership distributes cash in redemption of an ownership interest, a partner does not recognize gain until they receive a cash distribution in excess of

³¹⁵ Treas. Reg. § 1.743-1(f) ("[A] transferee's basis adjustment is determined without regard to any prior transferee's basis adjustment."). One commentator has argued that reverse 704(c) adjustments would result in different allocations of taxable gain depending on when they bought into a fund, which would result in the shares not being fungible. Yale, *supra* note 16, at 438. If, however, a fund has made a Section 754 election and it adjusts the basis of partnership property for the purchaser upon a transfer of an interest, the shares should be fungible for a purchaser—it would not matter whether a purchaser acquired a share with large or small book-tax difference since the purchaser would have the same Section 743 basis adjustment.

³¹⁶ See Invesco Trust Prospectus, supra note 3099, at 81 (noting the need to obtain secondary market transaction information for all shareholders to make the Section 743 basis adjustments).

³¹⁷ See Invesco Trust Prospectus, supra note 3099, at 79–80 (noting that a shareholder who redeems shares during a month may be allocated income, gain, loss, and deduction realized after the date of the redemption and that monthly allocation may be consistent with IRS regulations requiring daily allocations of tax items between buyers and sellers of partnership interest under Section 706).

basis.³¹⁸ Adopting this rule for RICs would permit a shareholder to defer tax until the total cash received exceeded a shareholder's total basis in her fund shares.³¹⁹

If a partnership has a Section 754 election in effect and a partner realizes gain on the distribution of cash, the partnership can increase the basis of its property by the amount of gain recognized.³²⁰ This helps to ensure that any gain recognized by the partner receiving a distribution of cash in excess of basis is not taxed again to another partner and would mitigate overhang.

The treatment of distributions of property other than cash raises additional policy and administrative challenges. Distributions of property by a partnership are generally tax free, but they are treated differently depending on whether the distribution is a liquidation of a partner's interest or a non-liquidating distribution.³²¹

In a non-liquidating distribution of property, a partner generally takes a carryover basis in the property and reduces his basis in his partnership interest.³²² In contrast, in a liquidating distribution, the partner's basis in the partnership is assigned to the distributed property. Consequently, the partner's basis in the property could be greater or less than the partnership's basis in the property distributed.³²³ If the partnership has a Section 754 election in effect, it can adjust the basis of its remaining property by the difference between the basis of the property distributed

³¹⁸ I.R.C. §§ 731(a) (gain not recognized to partner except if cash distributed exceeds basis of partnership interest); and 733 (basis reduced by money distributed to partner). Partners have a unitary basis in their partnership interests.

 $^{^{319}}$ In a redemption by a shareholder in a RIC, a shareholder determines gain or loss on a share-by-share basis.

 $^{^{320}}$ I.R.C. § 734(b)(1)(A) (basis of partnership property increased by any gain recognized under Section 731(a)(1)). If a loss is recognized, the partnership decreases the basis of its property. *Id.* § 734(b)(2)(A).

³²¹ If the only property distributed is cash, unrealized receivables, or inventory in liquidation of a partner's interest, and the basis of such property is less than the basis of the partner's interest in the partnership, the partner will recognize loss. I.R.C. § 731(a)(2). In certain circumstances, the distribution of marketable securities is treated as a distribution of cash, but this rule does not apply to investment partnerships. I.R.C. §§ 731(c)(1) and (c)(3)(A)(iii).

³²² I.R.C. §§ 732(a)(1) (basis of property distributed to partner in non-liquidating distribution is the same as the partnership basis in the property but limited to partner's basis in partnership); and 733 (basis of partnership interest reduced by basis of property distributed). If a partner's basis is less than the basis of the property distributed, the property will take a basis equal to the partner's basis in her partnership interest immediately before the distribution. *Id.* § 732(a)(2).

³²³ I.R.C. § 732(b) (basis of property distributed in liquidation is equal to partner's basis in partnership interest immediately before the distribution). The rules for allocating the basis among the distributed property are found in Section 732(b).

and the liquidating partner's basis in his partnership interest.³²⁴ Overall, basis is neither lost nor gained.

Adopting these rules for RICs would not, however, address the issues raised by Section 852(b)(6) generally and heartbeat trades in particular, as RICs could continue to distribute property tax-free to their shareholders in either a liquidating or non-liquidating distribution. In the case of a liquidating distribution, a redeeming shareholder would take a basis in the property equal to the basis in her redeemed interest; the property distributed could have a built-in gain or loss in the hands of the liquidated partner.

In the case of a non-liquidating distribution, neither the shareholder nor the RIC would recognize gain, but since the redeeming shareholder would generally take a carryover basis in any property received, any built-in gain in the distributed property would ultimately be taxed to the redeeming shareholder.³²⁵ Thus, a RIC could distribute tax-free low basis property to a redeeming shareholder and thereby leave less future taxable gains for other shareholders.³²⁶

One commentator has argued that if appreciated property were distributed to an AP and the tax burden from the sale of the property were shifted from an ETF to a redeeming AP, the redemption-contribution mechanism used to maintain the parity between share price and NAV could fall apart.³²⁷ Since APs could be taxed on the sale of property received in a redemption, APs may not participate in the redemption-creation process because they would not know whether they would receive appreciated property when redeeming. Upon closer inspection this argument is mistaken.

To illustrate, assume that an ETF has two shareholders, AP1 and S2. AP1 has a basis of 100 and S2 has a basis of 50 in the ETF shares. Both interests are worth 100. If the ETF makes a non-liquidating distribution to AP1 of property with a basis of 50 and a FMV of 75, AP1 would have a carryover basis of 50 in the property with a built-in gain of 25 and a basis of 50 in her remaining interest now worth 25. Although the distributed property has

 $^{^{324}}$ Id. § 734(a)–(c).

³²⁵ Under Section 732(a)(2), if the basis of the property distributed were greater than the partner's outside basis, the basis of the property distributed would be stepped down to the partner's outside basis, and the partnership would increase the basis of its remaining property by the difference in the property's basis and the partner's basis in her partnership interest. See also id. § 734(b)(1)(B) (the same rules, applicable to liquidating distributions).

 $^{^{326}}$ This assumes that the appreciated property was not contributed by another partner. See id. § 704(c)(1)(B).

³²⁷ Hodaszy, Section 852(b)(6) Loophole, supra note 26, at 85.

a built-in gain of 25, that gain is exactly offset by the unrealized loss in the retained ETF interest. Since APs are certainly dealers in securities, under Section 475(a) they are subject to mark-to-market treatment on their securities. Thus, they can sell both positions and offset the gains and losses or retain one or both of them, but all gains and losses from both positions will be recognized at year end.

Current partnership rules permit tax-free distributions of property, both pro rata distributions and non-pro rata distributions under Section 852(b)(6). For instance, a partner could contribute unappreciated securities³²⁸ to a partnership and thereafter be redeemed tax free with a custom basket of appreciated securities.³²⁹ Consequently, adoption of current partnership rules would permit heartbeat trades and continue to allow RICs to make tax-free portfolio adjustments.

In sum, adoption of partnership principles could significantly reduce the problem with overhang, albeit with an increase in administrative complexity at the fund level. Given the treatment of distributions of partnership property, however, current partnership principles would be insufficient to prevent heartbeat trades and prevent a fund from making tax-free portfolio adjustments. These partnership rules could be modified, for example, by treating distributions of appreciated securities as a taxable event. Alternatively, Congress could opt to live with the limitations of Subchapter M and overhang but focus on eliminating Section 852(b)(6).

E. Summary

The ability of ETFs to distribute tax free appreciated securities and make tax-free portfolio adjustments using the exemption of Section 852(b)(6) should be curtailed. The exploitation of this rule as a mechanism to allow ETFs to reduce unrealized gain via distributions of appreciated property both in ordinary redemptions and in heartbeat trades was certainly not contemplated by Congress when it enacted the provision in 1969. Congress should

 $^{^{328}}$ Special rules apply to contributions of appreciated property that is distributed to another partner. See I.R.C. § 704(c)(1)(B).

³²⁹ If a partnership had a Section 754 election in effect, when property is distributed and other partners have Section 743 basis adjustments with respect to the distributed property, those adjustments would have to be allocated to other property. See Treas. Reg. § 1.743-1(g)(2). These adjustments would certainly impose significant administrative costs if partnership interests are turned over frequently, and the partnership frequently distributes property. Importantly, this ensures that the gains remain at the partnership level.

either repeal Section 852(b)(6) or limit it to pro rata distributions of an ETF's portfolio and concomitantly require ETFs to reduce the basis of their securities by any gains realized when distributing property in redemption of their shares.

Annex 1:

Realized Gains on In-Kind Redemptions and Capital Gains Distributions for the Largest (by AUM) Equity ETFs (June 15, 2021)

Source: etf.com

| Nume Aum Aum Aport Date Rock PM Aum Report Date Rock PM Cost Fire Spiniste Cost PM Cost Fire Spiniste Spiniste Spiniste Spiniste Cost PM Cost Fire Spiniste | | | | | Total Common | | Net Unrealized | In-kind | Gain (Loss) on In-kind | Capital Gains | Capital Loss |
|--|--|----------|-------------|-----------------|--------------|------------|----------------|-------------|---------------------------|---------------|---------------|
| Section Sect | Name | | AUM | Ann Report Date | Stock (FMV) | Cost (Tax) | Gains/Losses | Redemptions | Redemptions | | Carryfordward |
| ##RETET 8 28435 3/3/2021 26154 264 256 34 49.04 118.70 0.00 particles 8 250.72 12/31/2020 10.075.21 529.12 529.12 10.00 118.70 0.00 119.70 119.70 12/31/2020 135.68 129.00 12.00 12/31/2020 135.68 129.00 12.00 12/31/2020 135.68 129.00 12.00 12/31/2020 135.68 129.00 12.00 12/31/2020 135.68 129.00 12.00 12/31/2020 129.0 | SPDR S&P 500 ETF Trust | | 369.14 | 9/30/2020 | 293.91 | 300.38 | (6.48) | 237.28 | 33.44 | ŏ | .6) |
| WATERITE B 29,07 12/21/2000 1075,21 529,02 555,14 290,02 11,02 12,02 | Shares Core S&P 500 ETF | | 284.35 | 3/3/2021 | 261.54 | 206.47 | 56.83 | 49.04 | 18.70 | 0.00 | (4 |
| B 231.07 11/31/200 154.50 382.05 279.82 43.53 32.5 0.00 | Vanguard Total Stock Market ETF | ໝ | 250.72 | 12/31/2020 | 1,075.21 | 529.12 | 555.16 | 18.06 | 14.12 | 0.00 | (15. |
| TFT C | Vanguard S&P 500 ETF | σ | 231.07 | 12/31/2020 | 634.50 | 362.05 | 274.82 | 43.53 | 32.25 | 0.00 | .8) |
| TFT C | Invesco QQQ Trust | | 172.22 | 9/30/2020 | 135.68 | 129.26 | 6.42 | 192.12 | 30.48 | 0.00 | (3. |
| EFIF dd 83.77 1/31/2020 85.93 70.00 2000 EFIF d 83.77 1/31/2020 85.97 70.31 13.80 4.11 0.91 0.00 83.77 8/31/2020 55.80 4.96 77.77 2.87 0.07 0.00 F R 83.77 8/31/2020 145.99 20.20 85.84 10.55 0.00 83.78 3/31/2021 67.36 2.30 1.0.51 13.57 0.00 83.93 1/2021 67.36 2.30 1.0.51 13.57 0.00 84 25.95 3/31/2021 67.36 2.30 10.57 10.00 85 25.95 3/31/2021 67.36 2.30 10.57 10.50 0.00 86 25.34 3/31/2021 67.36 2.30 10.57 10.50 0.00 87 25.34 3/31/2021 67.30 10.50 10.50 10.00 88 25.39 3/31/2021 67.30 10.50 10.50 10.00 89 25.39 3/31/2021 67.30 10.50 10.50 10.00 80 25.39 3/31/2021 67.30 10.50 10.50 10.00 80 25.39 3/31/2021 67.30 10.50 10.50 10.00 80 25.39 3/31/2021 67.30 10.50 10.50 10.00 80 25.39 3/31/2020 15.00 10.00 10.00 80 10/31/2020 132.28 81.48 51.85 9.85 11.55 0.00 80 10/31/2020 11.40 10.30 10.30 10.50 10.00 80 10/31/2020 11.40 10.30 10.50 10.50 10.50 10.50 80 44.52 1/31/2020 11.40 10.30 10.50 10.50 10.50 80 14.52 1/31/2020 11.40 10.50 10.50 10.50 10.50 80 14.52 1/31/2020 11.40 10.50 10.50 10.50 10.50 80 14.52 1/31/2020 11.40 10.50 10.50 10.50 10.50 80 14.52 1/31/2020 11.40 10.50 10.50 10.50 10.50 80 14.52 1/31/2020 11.63 20.90 10.00 10.50 80 14.52 1/31/2020 11.63 20.90 10.50 10.50 80 14.52 1/31/2020 11.63 20.90 10.50 10.50 80 14.52 1/31/2020 11.63 20.90 10.50 10.50 80 14.52 1/31/2020 11.63 20.90 10.50 10.50 80 14.52 1/31/2020 11.63 20.90 10.50 10.50 80 14.52 1/31/2020 11.63 20.90 10.50 10.50 80 14.52 1/31/2020 11.63 20.90 10.50 10.50 80 14.52 1/31/2020 11.63 20.90 10.50 80 14.52 1/31/2020 11.63 20.90 10.50 80 14.52 10.30 10.50 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.30 10.50 80 14.52 10.50 10.50 80 14.52 10.50 10.50 80 14.52 10.50 10.50 80 14.52 10.50 10.50 80 14.52 10.50 10.50 80 14.52 10.50 10.50 80 | Vanguard FTSE Developed Markets ETF | c | 102.04 | 12/31/2020 | 136.89 | 113.15 | 26.37 | 2.77 | 1.05 | 0.00 | (3.: |
| EFF d 83.75 10/31/2020 85.97 72.31 15.32 2.24 0.62 0.00 EFF e 83.30 11/31/2020 92.80 72.80 20.91 6.81 3.07 0.00 d P. 20 2.30 12/31/2020 98.82 76.09 20.91 6.81 3.00 0.00 A P. 20 2.30 12/31/2020 98.82 76.09 20.91 6.81 3.00 0.00 A P. 20 2.30 12/31/2020 3.92 20.91 6.81 13.57 8.39 0.00 B C. 20 3.31/2021 66.15 76.93 12.73 8.83 0.00 B B 26.64 3.31/2020 46.75 79.30 12.73 88.03 11.34 0.00 B I 48.69 12/31/2020 48.79 49.79 12.23 30.98 0.00 0.00 B I 47.14 12/31/2020 132.28 | Shares Core MSCI EAFE ETF | | 96.96 | 7/31/2020 | 65.53 | 70.60 | (3.86) | 4.51 | 0.91 | 0.00 | (1.: |
| EFF | Vanguard FTSE Emerging Markets ETF | Q | 83.75 | 10/31/2020 | 85.97 | 72.31 | 15.32 | 2.34 | 0.62 | 0.00 | (13. |
| R | Shares Core MSCI Emerging Markets ETF | | 83.27 | 8/31/2020 | 52.80 | 49.60 | 7.27 | 2.87 | 0.75 | 0.00 | (5. |
| F 78.03 21/31/2021 63.06 37.22 26.81 10.56 6.72 0.00 | Vanguard Value ETF | e | 81.30 | 12/31/2020 | 96.82 | 76.08 | 20.91 | 6.81 | 3.00 | 0.00 | (3. |
| 75.03 3/31/2021 63.06 37.32 26.81 13.57 8.39 0.00 | Vanguard Growth ETF | - | 78.03 | 12/31/2020 | 145.59 | 62.20 | 83.84 | 10.36 | 6.72 | 0.00 | (3. |
| 11.95 3/3/2021 67.26 54.30 16.77 5.44 2.23 0.00 | Shares Russell 1000 Growth ETF | | 75.03 | 3/31/2021 | 63.06 | 37.32 | 26.81 | 13.57 | 8.39 | 0.00 | (1) |
| Record R | IShares Core S&P Small-Cap ETF | | 71.95 | 3/3/2021 | 67.26 | 54.30 | 16.77 | 5.44 | 2.23 | 0.00 | (2. |
| B S905 1/31/2021 61.03 48.60 14.60 9.19 9.00 0.00 | Shares Russell 2000 ETF | | 70.45 | 3/31/2021 | 69.15 | 77.93 | (2.73) | 88.03 | 11.34 | 0.00 | (8. |
| ### S905 131/2021 62.32 20.23 3.09 0.00 0.00 Proceedings | Shares Core S&P Mid-Cap ETF | | 63.34 | 3/3/2021 | 61.03 | 48.60 | 14.69 | 9.19 | 3.08 | 0.00 | (£ |
| S7.54 7/31/2020 45.79 49.79 3.26) 11.22 1.45 0.00 | Vanguard Dividend Appreciation ETF | 0°Q | 59.05 | 1/31/2021 | 62.32 | 42.32 | 20.23 | 3.09 | 0.00 | 0.00 | (2.1 |
| Property | Shares MSCIEAFE ETF | | 57.54 | 7/31/2020 | 45.79 | 49.79 | (3.26) | 11.22 | 1.45 | 0.00 | (6. |
| h 49.66 12/31/2020 33.2.28 81.48 51.85 96.5 61.2 0.00 FF I 48.49 10/31/2020 35.70 38.78 15.23 35.68 15.55 0.00 0 FF k 46.71 12/31/2020 114.06 80.28 36.01 12.52 7.77 0.00 0 I 41.62 12/31/2021 61.41 57.43 43.3 93.9 2.13 0.00 Net Assets of Soft Common Totals 41.25 9/30/2020 16.63 20.90 (4.21) 27.89 0.95 0.00 1 FIF Shares Stock 51.79 30.95 2.007 34.05 2.605 8.05 13.97 2.000 0.00 1 FIF Shares Stock 13.79 2.904.75 2.974.75 1.250.91 817.77 208.10 0.00 1 81.48 31.98 43.98% 4.176.87 2.974.75 1,250.91 | Shares Russell 1000 Value ETF | | 55.39 | 3/31/2021 | 50.99 | 41.43 | 9.96 | 5.84 | 1.41 | 0.00 | (3. |
| | Vanguard Mid-Cap ETF | 5 | 49.66 | 12/31/2020 | 132.28 | 81.48 | 51.85 | 9.65 | 6.12 | 0.00 | (8. |
| | Vanguard Total International Stock ETF | _ | 48.49 | 10/31/2020 | 367.09 | 358.78 | 15.23 | 35.68 | 15.55 | 0.00 | (17. |
| FF k 46.72 2/28/2021 47.33 26.94 20.54 2.58 1.69 0.00 I 41.62 1/31/2021 61.41 57.43 4.33 9.39 2.13 0.00 41.42 9/30/2020 16.63 20.90 (4.21) 27.89 0.95 0.00 Post Assets of March Stock FIF Shares Stock 17799 28.05% 87.58 63.98% 61.43 71.46% 61.43 71.46% 61.43 71.46% 61.43 83.19% 41.59 31.44% 41.59 31.44% 41.59 31.44% 41.59 31.44% 41.59 32.27% 41.687 27.37% 41.687 27.28% Mean 49.00% | Vanguard Small-Cap ETF | | 47.14 | 12/31/2020 | 114.06 | 80.28 | 36.01 | 12.52 | 7.77 | 0.00 | (6. |
| 41.62 1/31/2021 61.41 57.43 4.33 9.39 2.13 0.00 41.62 1/31/2021 61.63 20.90 (4.1) 27.89 0.95 0.00 41.12 9/30/2020 16.63 20.90 (4.1) 27.89 0.95 0.00 41.12 9/30/2020 34.05 26.05 8.05 13.97 0.90 41.12 9/30/2020 34.05 26.05 8.05 13.97 0.00 41.12 9/30/2020 34.05 26.05 8.05 13.97 0.00 41.12 9/30/2020 34.05 26.05 8.05 13.97 0.00 41.12 9/30/2020 34.05 26.05 8.05 13.97 0.00 41.12 9/30/2020 34.05 26.05 8.05 13.97 0.00 41.12 9/30/2020 34.05 26.05 8.05 13.97 0.00 41.12 9/30/2020 34.05 26.05 8.05 13.97 0.00 41.12 9/30/2020 34.05 26.05 8.05 13.97 0.00 41.12 9/30/2020 34.05 26.05 8.05 13.97 0.00 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 0.00 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 0.00 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 0.00 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 817.77 208.10 41.12 9/30/2020 34.05 26.05 1.250.91 41.12 9/30/2020 34.05 26.05 1.250.91 41.12 9/30/2020 34.05 26.05 1.250.91 41.12 9/30/2020 34.05 26.05 1.250.91 41.12 9/30/2020 34.05 1.250.91 41.12 9/30/2020 34.05 1.250.91 | Vanguard Information Technology ETF | * | 46.72 | 2/28/2021 | 47.33 | 26.94 | 20.54 | 2.58 | 1.69 | 0.00 | (0. |
| Met Assets of Stock Mathematical Stock Mathem | Vanguard Real Estate ETF | _ | 41.62 | 1/31/2021 | 61.41 | 57.43 | 4.33 | 9.39 | 2.13 | 0.00 | (2. |
| Net Assets of % of Common FIFF Shares Stock St | Financial Select Sector SPDR Fund | | 41.42 | 9/30/2020 | 16.63 | 20.90 | (4.21) | 27.89 | 0.95 | 0.00 | (0 |
| Net Assets of % of Common EFF Shares Stock 202.07 18.79% 177.99 28.05% 87.58 63.98% 61.43 71.46% 61.58 63.61% 68.47 47.03% 51.84 83.15% 41.59 31.44% 41.59 31.44% 41.59 31.44% 41.59 37.49 83.16% 41.48 87.58% Mean 49.00% | leciliology select sector seda ralla | | 41.23 | 3/30/2020 | 34.05 | 7 070 75 | 350.01 | 13.97 | 3.97 | 0.00 | (133 |
| Net Assets of ETF Shares, 202.07 177.99 87.58 61.43 61.58 61.43 41.59 21.89 37.49 41.49 37.49 41.48 32.06 | | | | iotais | 4,170.07 | 2,574.25 | 1,000,1 | 977.77 | 200.10 | 0.00 | 123 |
| EFF Shares 202.07 177.99 87.58 61.43 61.58 61.43 61.58 21.84 41.59 22.29 37.49 41.48 32.06 Mean | | | % of Common | | | | | | | | |
| 177.99 87.58 61.43 64.58 68.47 51.84 41.59 28.29 37.49 41.48 32.06 | Vanguard Fund | 202.07 | 18 79% | | | | | | | | |
| 87.58 81.58 61.43 61.43 68.47 51.84 41.59 28.29 27.49 41.48 32.06 Mean | 5 1 | 177 99 | 28.05% | | | | | | | | |
| 61.43 61.58 68.47 51.84 41.59 28.29 37.49 41.48 32.06 Mean | c : | 87.58 | 63.98% | | | | | | | | |
| 61.58 68.47 51.84 41.59 37.49 37.48 32.06 Mean | Q | 61.43 | 71.46% | | | | | | | | |
| | е | 61.58 | 63.61% | | | | | | | | |
| | - | 68.47 | 47.03% | | | | | | | | |
| | pto. | 51.84 | 83.19% | | | | | | | | |
| | 5 | 41.59 | 31.44% | | | | | | | | |
| | - | 28.29 | 7.71% | | | | | | | | |
| | | 41.49 | 97.65% | | | | | | | | |
| • | -: | 32.06 | 52.22% | | | | | | | | |
| | | | | | | | | | | | |
| | | Mean | 49.00% | | | | | | | | |