Taxation and Risk-Taking:

Solving New Zealand's Foreign Investment Fund Liquidity Problem

with a Retrospective Capital Gains Tax

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Abstract

New Zealand is one of the few jurisdictions in the world to implement an ex ante wealth tax on capital. Parliament introduced such a system in 2007 when it overhauled the so-called foreign investment fund regime which taxes residents' foreign portfolio holdings. However, the tax treatment of illiquid holdings under this system deters desirable migrants from becoming New Zealand tax residents. That treatment also distorts markets through what I call a "double lock-in effect". Through hypothetical scenarios, I illustrate how the rules regarding illiquid offshore equities result in a windfall for either the government or the taxpayer at the expense of the other party. Based on theoretical work by Alan Auerbach and Louis Kaplow, I propose a retrospective realization method to replace the current method of calculation for illiquid and hard-to-value securities. Additionally, I critique various other market distortions and tax avoidance techniques the current rules encourage. Ultimately, I argue that the ex ante tax rate should follow the short-term risk-free rate and the government should disallow taxpayer election of accrual taxation in years of low or negative economic return.

I. INTRODUCTION

A. Overview

Talented potential immigrants are avoiding New Zealand tax residency.[1] New Zealand's foreign portfolio taxation rules prevent the type of international tax avoidance rife in the 1980s but they also deter foreigners with illiquid assets from migrating to the country. All else being equal, this shrinks New Zealand's tax base.[2] Additionally, the perceived unfairness of a tax on illiquid assets may encourage existing tax residents to evade the tax.[3]

New Zealand's Foreign Investment Fund ("FIF") regime taxes foreign portfolio equities on a deemed-income basis.[4] The rules impute income based on the capital value of taxpayers' assets independent of realization or receipt. This valuation and imputation

[1] See the empirical research in Peter Wilson and Julie Fry, "The Place Where Talent Does Not Want to Live: The Intersection of New Zealand Immigration and Tax Policies in a Globalising World" (New Zealand Institute of Economic Research, forthcoming 2024).

[2] New Zealand taxes residents on their worldwide income and non-residents on their New Zealand-sourced income. Income Tax Act 2007 (NZ) (hereafter cited as "ITA 2007"), ss BD 1 and YD 4. This means that non-residents are not taxed on their income sourced outside of New Zealand. ITA 2007, s BD 1(5).

[3] The committee that originally designed the rules considered the risk of perceived unfairness contributing to noncompliance: "The [consultative document] gives too little weight to the importance, in a tax system based on voluntary compliance, of acknowledging taxpayer perceptions of 'fairness'. If the [accrual tax] regime were implemented as proposed, it would encourage evasion and stretch the limits of avoidance because taxpayers would regard it as very unfair. The objective of retaining taxpayer goodwill should be kept in mind." Arthur Valabh et al., "International Tax Reform - Part 1 - Report of the Consultative Committee" (New Zealand Treasury, March 1988), https://www.taxpolicy.ird.govt.nz/publications/1988/1988-other-international-tax-report-part-1, archived at https://perma.cc/B77B-GHH3 at [1.5.8]. The government will struggle to confirm the valuation of private closely held companies in foreign jurisdictions. Taxpayers could relatively easily evade the tax by providing misleading or false information to independent valuers.

[4] I use "portfolio equities" here to refer to interests of less than 10 percent in a foreign entity. Assuming the controlled foreign company ("CFC") rules in the ITA 2007, ss EX 1 to EX 27 do not apply, then interests between 10 and 40 percent are still captured by the FIF rules. However, s EX 46(3)(a) allows taxpayers holding greater than 10 percent interests to use the attributable FIF income method in s EX 50. That method applies a modified version of the CFC rules. Thus, holders of non-portfolio FIF interests can benefit from the same active business exemption as the CFC rules contain in s EX 21B.

process happens annually: taxpayers generally owe tax at the end of each year on a percentage of the value of their foreign portfolio at the start of the year.[5]

The FIF regime serves two purposes. One, it is an anti-avoidance mechanism. It prevents New Zealanders from using offshore vehicles to avoid domestic taxation and hence protects New Zealand's tax base.[6] Two, it alleges to promote capital export neutrality.[7] Anti-avoidance and neutrality remained strong policy threads as the regime evolved.[8] Throughout this paper, I show how the flaws of the current FIF rules detract from

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[5] ITA 2007, s EX 52.

[6] Valabh et al., "International Tax Report Part 1," 5 at [1.5.1]; New Zealand Inland Revenue Department, "Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2) (Commentary on the Bill)" (Wellington: Policy Advice Division of the Inland Revenue Department, May 2006), 19, https://www.taxpolicy.ird.govt.nz/-/media/project/ir/tp/publications/2006/2006-commentary-arsimp/2006-commentary-arsimp-pdf.pdf, archived at https://perma.cc/3UU2-3TGJ; Craig Elliffe, *International and Cross-Border Taxation in New Zealand*, 2nd ed. (Wellington: Thomson Reuters New Zealand Limited, 2018), 267–68 at [14.1].

[7] "'[C]apital export neutrality'…holds when foreign- and domestic-source income are taxed in the same way so that residents are indifferent on tax considerations between investing offshore or domestically." Valabh et al., "International Tax Report Part 1," 9–10 at [1.5.9]-[1.5.11]; Arthur Valabh et al., "Consultative Document on International Tax Reform" (Wellington: New Zealand Treasury, December 1987), 12–14, https://www.taxpolicy.ird.govt.nz/-/media/project/ir/tp/publications/1987/1987-dd-international-tax-reform/1987-dd-international-tax-reform-pdf.pdf archived at https://perma.cc/66ZT-KYWN at [3.3]-[3.4]; New Zealand Inland Revenue Department, "Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2) (Commentary on the Bill)," 19.

[8] Regarding avoidance in the proposed second generation of FIF rules, see "Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2) (First Reading)" (2006), https://www.parliament.nz/en/pb/hansard-debates/rhr/document/48HansD_20060525_00000824/taxation-annual-rates-savings-investment-and-miscellaneous, archived at https://perma.cc/RJ44-TYJ8 at 631 NZPD 3440. Regarding neutrality, see Robert McLeod et al., "Tax Review 2001: Final Report" (Wellington: New Zealand Treasury, October 2001), 87, https://www.treasury.govt.nz/sites/default/files/2007-11/taxreview2001-report.pdf, archived at https://perma.cc/EWC8-K58A at [8.62]; New Zealand Inland Revenue Department, *Taxation of Non-Controlled Offshore Investment in Equity: An Officials' Issues Paper on Suggested Legislative Amendments* (Wellington, N.Z.: Policy Advice Division, Inland Revenue, 2003), 75 at [7.6.2]; Craig Stobo, "Towards Consensus on the Taxation of Investment Income," October 2004, 4, https://www.taxpolicy.ird.govt.nz/-/media/project/ir/tp/publications/2004/2004-other-report-stobo-taxation-investment-income/2004-other-report-stobo-taxation-investment-income-pdf.pdf, archived at https://perma.cc/8L7Y-HCMJ; New Zealand Inland Revenue Department, "Taxation of Investment Income: The Treatment of Collective Investment Vehicles and Offshore Portfolio Investments in Shares" (Wellington: Policy Advice Division of the Inland Revenue Department, June 28, 2005), 48, https://www.taxpolicy.ird.govt.nz/-/media/project/ir/tp/publications/2005/2005-dd-investment-income/2005-dd-investment-income-pdf.pdf, archived at https://perma.cc/DC4H-Q3BS at [5.4].

each of these goals. Indeed, it is often the lack of neutrality that leads to planning and avoidance opportunities.[9]

Political concessions in the legislative process undermined what could have been a robust system for taxing foreign capital. The resulting legislation may have the opposite of the original intended effect. That is, given the ability to opt for accrual taxation in low return years, the fixed deemed rate of return, no tax in the year of asset acquisition, and deemed values on hard-to-value assets, sufficient tax planning can result in an after-tax economic advantage from offshore investments. I explain these rules in Section I.B, then I survey the legislative history of their two generations in Section II.

The public criticized the amendments to the regime in 2006 on the grounds that the proposed rules unfairly taxed people in years of economic loss.[10] However, it turns out that, under the system, taxpayers have the freedom to adjust their risk taking—and risk sharing with the government—anywhere along a spectrum.[11] Taxpayers can rebalance their portfolios to share in both the upside and downside risk with the government if they so choose. The risk sharing on the downside counters taxpayers' complaints that the government taxes them in years of loss. In contrast, taxpayers holding existing illiquid positions do not have the same rebalancing opportunity. In Section III.A, I demonstrate

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[9] New Zealand distinguishes tax avoidance from acceptable tax planning. All tax avoidance is illegal and void in New Zealand based on the general anti-avoidance rule which simply states "[a] tax avoidance arrangement is void as against the Commissioner for income tax purposes." ITA 2007, BG 1. Of course, the courts shoulder the burden to determine the line between a "tax avoidance arrangement" and acceptable tax planning. See infra Section III.C.2 for more on New Zealand's general anti-avoidance rule.

[10] "Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2) (Select Committee Interim Report)," September 27, 2006, 3, https://www.parliament.nz/resource/en-NZ/48DBSCH_SCR3596_1/cd1f4e8f15b01af799582df26ca1f0a1cd262537, archived at https://perma.cc/73QB-9LHG.

[11] Evsey D. Domar and Richard A. Musgrave, "Proportional Income Taxation and Risk-Taking," *The Quarterly Journal of Economics* 58, no. 3 (May 1944): 388, https://doi.org/10.2307/1882847.

how taxpayers can rebalance liquid assets. I compare that to the balancing issues taxpayers with illiquid assets face. I conclude Section III.A by showing how potential immigrants may encounter insurmountable tax barriers to becoming New Zealand residents.

The FIF regime currently taxes illiquid and hard-to-value assets under the so-called cost method.[12] The rules deem the value of assets taxed under this method to increase in value by five percent each year.[13] The steady upward trajectory of the deemed value versus the stochastic actual value of the underlying assets inevitably diverges over time. The actual value outpacing the deemed value incentivizes taxpayers to hold rather than sell assets since the government is effectively undertaxing those assets. Conversely, when deemed value exceeds actual value, the government overtaxes the asset. In either scenario, the government or taxpayer realizes an economic windfall at the expense of the other party. Taxpayers can only use the cost method for hard-to-value assets. The rules incentivize taxpayers not only to hold hard-to-value assets, but to ensure those assets remain hard to value. I have coined the phrase "double lock-in" to describe this effect. I discuss the cost method value divergence and its lock-in effect in Section III.B.

Policymakers ameliorated submitters' cries of inequity by allowing individual taxpayers and family trusts to opt for accrual taxation in years where their foreign portfolios return economic gain less than the deemed income rate.[14] This policy setting distorts the market by incentivizing taxpayers to invest in more volatile foreign portfolios. Using a historical analysis and option pricing theory, I show how the taxpayer's optionality cuts the

[12] ITA 2007, s EX 56.
[13] ITA 2007, s EX 56(4).
[14] "Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2) (Select Committee Interim Report)," 3.

government's claim on tax to approximately half of its claim under an exclusively deemed income system. Furthermore, I demonstrate that the government's claim can reduce a further 35 percent when taxpayers invest in a highly volatile foreign portfolio. I analyze and demonstrate these results in Section III.C.1. I spend the remainder of Section III.C outlining other market distortions and planning opportunities, including the problem with fixing the deemed income rate at five percent rather than varying it based on the short-term risk-free rate.

Louis Kaplow's work on taxation, risk-taking, and general equilibrium seems to have influenced the progenitors of the deemed income taxation method.[15] Kaplow's ex ante wealth tax operates equivalently to New Zealand's deemed income rules. Alan Auerbach's discrete formulation of his so-called retrospective capital gains tax is an iterative implementation of Kaplow's ex ante wealth tax.[16] Given this, I propose replacing the cost method with a version of Auerbach's system which I call the retrospective realization method. In section IV.A I compare Kaplow's ex ante wealth tax to New Zealand's fair dividend rate method and introduce the retrospective realization method. I spend the remainder of Section IV discussing proposals to account for progressive rates under the new method and show how simply New Zealand can transition from the cost method to the retrospective realization method.

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[15] David White, "The Impact of Economic Theory on Capital Gains Tax Reform," in *Capital Gains Taxation: A Comparative Analysis of Key Issues*, ed. Craig Elliffe and Michael Littlewood (Northampton: Edward Elgar Publishing, 2017), 67; Louis Kaplow, "Taxation and Risk Taking: A General Equilibrium Perspective," *National Tax Journal* 47, no. 4 (1994): 789–98, https://doi.org/10.1086/NTJ41789108.
[16] Alan J. Auerbach and David F. Bradford, "Generalized Cash-Flow Taxation," *Journal of Public Economics* 88, no. 5 (April 2004): 960, https://doi.org/10.1016/S0047-2727(03)00044-6 at [Equation 4].

Ultimately, I argue that New Zealand should replace the cost method with the retrospective realization method, remove the option to elect accrual taxation and set the deemed income rate to the short-term risk-free rate.

B. FIF regime calculation methods for individuals and family trusts

Individuals and family trusts calculate the tax they owe under the FIF rules using three main methods:

- the fair dividend rate method ("FDR method"),[17]
- the cost method,[18] and
- the comparative value method ("CV method").[19]

The FDR method is the default.[20] It applies to securities whose prices are easily obtained, for example on a listed stock exchange.[21] To apply the FDR method, a taxpayer adds up the market value of every foreign security they hold at the start of each tax year (1 April in New Zealand),[22] multiplies the result by five percent and that amount becomes deemed FIF income.[23] For that tax year, ending 31 March of the following year, the taxpayer adds the FIF income to any taxable income.[24]

Take a simple example. Consider an individual New Zealand resident whose only offshore holdings are Microsoft and Apple stock. The value of those holdings on 1 April 2020 is $50,000 each. For the 2020-2021 tax year, the taxpayer will report $5,000 of

[17] ITA 2007, s EX 52 outlines the operation of the FDR "annual" method. Contrast this with the FDR "periodic" method in s EX 53.
[18] ITA 2007, s EX 56.
[19] ITA 2007, s EX 51.
[20] ITA 2007, s EX 48.
[21] ITA 2007, s EX 52(5) referencing "market value" as defined in s YA 1.
[22] ITA 2007, s YA 1 definition for "tax year". For practical purposes, values at "the start of the tax year" are really values at the end of the previous tax year on 31 March.
[23] ITA 2007, s EX 52(2).
[24] ITA 2007, s CQ 4 states simply "FIF income of a person is income."

deemed income given the formula $[(50{,}000 + 50{,}000) \times 5\%]$.[25] That income forms part of the taxpayer's total income.

The cost method operates almost identically. However, the cost method applies when the price of a foreign security is not easily obtained.[26] The taxpayer must obtain an independent valuation of the market value of the foreign security at the start of the tax year after acquisition.[27] The asset then enters the cost method and deems five percent of its fair market value on 1 April.[28] Then, for ensuing years, the cost method deems a five percent increase in capital value of the asset each year.[29] So, an asset independently valued at $100,000 will generate $5,000 of deemed income and will also be deemed to have increased in value to $105,000 the following year (and hence generate $5,250 of deemed income that following year). This deemed five percent increase in capital value continues and compounds every year unless and until the taxpayer obtains a lower independent valuation. Taxpayers are entitled to reset the cost method valuation of an interest in this way every five years.[30]

Let us extend the above example to include a security that is difficult to value. Consider our taxpayer invests $100,000 for a one percent share of a foreign private company in the 2020-2021 tax year. The taxpayer owes no tax on that asset in its year of acquisition.[31] The taxpayer obtains an independent valuation on 1 April 2021 that the interest is worth $100,000. Assume the value of the taxpayer's publicly traded shares

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[25] ITA 2007, s EX 52(3).
[26] ITA 2007, s EX 46(9)(b).
[27] ITA 2007, s EX 56(3)(b).
[28] ITA 2007, s EX 56(1).
[29] ITA 2007, s EX 56(4).
[30] ITA 2007, s EX 56(3)(b)(ii).
[31] Assuming foreign assets are purchased after the start of the tax year, neither the FDR method nor the cost method deem any income in the year of acquisition based on the definitions of "opening value" in ITA 2007, ss EX 52(5) and EX 56(3)(a).

increases in value 80 percent across the 2020-2021 tax year. For the 2021-2022 tax year, the taxpayer will have deemed income from the cost method of $5,000[32] and deemed income from the FDR method of $9,000.[33] For the 2021-2022 tax year, the deemed value of the taxpayer's interest in the foreign startup will be $105,000.[34]

The CV method only comes into play in tax years in which the economic gain of a taxpayer's entire foreign portfolio calculated under the FDR method is less than five percent. This includes years in which the portfolio generates an economic loss. The CV method considers realized and unrealized gains, losses, gross dividends[35] and other distributed income, then taxes the net gain across the income year.[36] The CV method treats a net economic loss as zero.[37] Taxpayers cannot selectively apply the CV method to some interests (those with economic gains less than five percent) and the FDR method to others (those with economic gains greater than five percent).[38] The CV method in isolation is an accrual method of taxation[39] without loss offsets. At the end of each tax year, rational

[32] $100{,}000 \times 0.05$
[33] $100{,}000 \times (1 + 0.80) \times 0.05$
[34] $100{,}000 \times 1.05$
[35] "Gross" meaning prior to any withholding tax at source. ITA 2007, s EX 51(4) defines "gains" to include "any foreign withholding tax…" Because foreign withholding tax generates a tax credit, considering net foreign dividend income would allow taxpayers to double dip.
[36] ITA 2007, s EX 51(1).
[37] ITA 2007, s EX 51(8).
[38] ITA 2007, s EX 46(8)(b). Inland Revenue described this as preventing "cherry picking" between the methods. New Zealand Inland Revenue Department, "Tax Information Bulletin: Volume 19, Issue 3," April 2007, 42, https://www.taxtechnical.ird.govt.nz/tib/volume-19---2007/tib-vol19-no3, archived at https://perma.cc/JAZ3-2NKR.
[39] Often called "mark-to-market" in the United States.

taxpayers will calculate their tax burden under both the FDR method and the CV method and choose to apply the method with the lower result.[40]

Consider our running example. In the 2022-2023 tax year, our taxpayer's Microsoft and Apple stock dropped by five percent in capital value. Even including dividends in that period, the holdings resulted in a net economic loss. So, the taxpayer would opt to apply the CV method to his portfolio. This would result in a deemed income of zero. However, the taxpayer would still have $5,250 of deemed income[41] based on a $110,250 deemed value[42] of the interest in the private company under the cost method.

When a taxpayer's portfolio of liquid securities produces an annual economic gain greater than five percent, it is treated as having produced a five percent gain for tax purposes. When the portfolio produces an economic gain between zero and five percent it is treated as having that exact gain for tax purposes. When the portfolio produces an economic loss, it is treated as having produced neither a loss nor a gain for tax purposes.

When framing the FIF regime as an accrual tax system it is one that places a cap on the economic gains it taxes each period and disallows loss offsets altogether. However, we can also frame the FIF regime as an ex ante wealth tax system. In this framing, if we treat the five percent deemed income mechanism as a proxy for the risk-free rate, then the system becomes an ex ante equivalent to an ex post accrual income tax with full loss offsets. Ignoring for a moment the taxpayer's right to choose the CV method, the FDR method

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[40] ITA 2007, s EX 44(2) grants taxpayers their choice of method for calculating FIF income limited by the rules in ss sections EX 46, EX 47, EX 47B, EX 48, and EX 62. Section EX 62(8) explicitly allows individuals and family trusts to repeatedly change between the FDR method and the CV method. To understand how widespread and accepted this practice is, consider that the Inland Revenue's FIF calculator suggests that one way to use the calculator is to "[u]se the combined FDR and CV calculator to compare and choose the lesser liability". "Foreign Investment Fund Calculator," accessed March 29, 2024, https://myir.ird.govt.nz/tools/_/, archived at https://perma.cc/L44V-NC45.

[41] $110{,}250 \times 5\%$

[42] $105{,}000 \times 1.05$

taxes the full economic gain or loss of the underlying assets ex ante for the relevant period.[43] But of course, we cannot ignore the taxpayer's right to select the CV method.[44] Nor can we ignore the fact that the risk-free rate is rarely, if ever, precisely five percent. I critique these aspects of the FIF regime in Section III.

C. This paper's scope

International taxation is an increasingly large and complex area of tax law and policy. This paper focuses on New Zealand's FIF rules as they affect individuals as opposed to New Zealand companies or unit trusts. This is because I intend to expose the barriers that talented individuals face when migrating to and/or remaining present in New Zealand. I principally analyze, criticize, and suggest amendments to the regime's treatment of illiquid and hard-to-value assets. Part of my critique depends on specific allowances for natural taxpayers or family trusts. Specifically, I critique taxpayers' right to elect the CV method and I argue that New Zealand should remove this option. This critique clearly does not apply to entities that cannot leverage the election.[45] However, most of my remaining critique applies more broadly to the FIF regime, independent of entity type. For example, my argument for converting the fair dividend rate to a variable risk-free rate applies universally. Most importantly, my proposed retrospective realization method, which solves

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[43] Louis Kaplow eloquently describes the equivalence in his 1994 NTJ article. That paper and its examples of taxpayer and government rebalancing to achieve general equilibrium inspired many of the hypotheticals I present in this paper. Kaplow, "Taxation and Risk Taking."

[44] Given the taxpayer's right to choose the CV method, we can also frame the government's claim against taxpayers' foreign equities as a bull call spread. On 1 April of each year, the government has a call option at the starting price of the portfolio with a long call option struck at that starting price and a short call option struck at five percent over that starting price. Taking this framing, we can price the present value of those options using a model like Black-Scholes. See infra Section III.C.1 for this analysis. All credit to Tom Brennan for identifying this option-pricing framing in a reading of a draft of this paper in our tax writing group at Harvard Law School on 21 March, 2024.

[45] ITA 2007, s EX 62(8).

the liquidity issue, is economically equivalent to the FDR method and the type of person to which it applies (legal or natural) is irrelevant.[46]

II. HISTORY

A. The first generation of FIF rules: accrual by default

New Zealand removed capital controls and floated its currency between 1984 and 1985.[47] After these changes, companies and individuals exploited planning mechanisms involving offshore entities, particularly in tax havens. New Zealand's lack of a comprehensive capital gains tax exacerbated the issue and increased the incentives to invest offshore. New Zealand taxpayers could indefinitely accrue income in low-tax jurisdiction entities and face negligible effective tax rates. More egregiously, New Zealand taxpayers selling their capital gain positions in those entities faced no domestic tax liability.[48] Given the risk of tax base erosion, Minister of Finance, Roger Douglas, appointed the Valabh Committee in his Budget of 1987. Douglas announced that the committee would undertake

[46] This assumes that the FDR/CV election option would be repealed since it only applies to individuals and family trusts not other entities. Additionally, the flat tax rates for companies and trusts simplifies the administration of the retrospective realization method by disregarding the progressivity considerations I discuss in Section IV.B.

[47] Richard Sullivan, "New Zealand History of Monetary and Exchange Rate Regimes" (New Zealand Association of Economists Annual Conference, Wellington, 2013), 7–10, at [3], https://www.nzae.org.nz/wp-content/uploads/2014/05/Sullivan.pdf, archived at https://perma.cc/37UA-YYLE.

[48] For a thorough canvassing of the tax planning opportunities prior to the introduction of the FIF and CFC regimes and during their first generation, see David Dunbar, "A Historical Review of the CFC & FIF Regimes: Part One 1987 to 1 December 2003," *Centre for Accounting, Governance and Taxation Research*, 2004, paras. 10–24, at [3], http://dx.doi.org/10.2139/ssrn.1281660. Given New Zealand's moderately high corporate tax rates historically, similar negligible effective tax rates are rare on domestic equity investments. However, the lack of capital gains tax domestically has likely fueled New Zealanders' overinvestment in real estate. For more on how tax rates affect investments in real property, see Patrick Aguiar Carvalho, Ben Baker, and Ashley Farquharson, "Housing as an Investment Asset in New Zealand," Analytical Note Series (Reserve Bank of New Zealand, June 30, 2022).

a consultative process on major tax reform to shore up the tax base and balance offshore and domestic investment incentives.[49]

Most calculation methods in the current generation of FIF rules originated in the first generation (excluding the FDR and cost methods).[50] The CV method, as in the current rules, was a method for calculating the accrual of economic gain or loss each year.[51] Whereas the current rules default to the FDR method, the original rules defaulted to the CV method.[52] Taxpayers could choose and apply the so-called accounting profits or branch equivalent methods[53] if they had sufficient accounting information.[54] In cases that an interest was hard to value the rules required application of the deemed rate of return ("DRR") method.[55] In this regard, the DRR method played the role that the cost method plays in the current regime. While the DRR method exists in the current regime, its usage is restricted and limited to hard-to-value foreign securities with characteristics more like debt than equity.[56]

Importantly, the original rules exempted entities resident in certain "grey list" countries. These grey list countries consisted of Australia, Canada, Germany, Japan, the

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[49] Valabh et al., "International Tax Report Part 1" at 1.5.1; Elliffe, *International and Cross-Border Taxation in New Zealand* at 14.1; Valabh et al., "Consultative Document," i–vi.

[50] The "attributable FIF income method" did not exist in the first generation of rules. However, it can be seen as an adaptation of the branch equivalent method, albeit with some major differences like requiring a minimum 10 percent interest and the ability to apply the active business exemption from the CFC rules.

[51] Income Tax Act 1994, s CG 18.

[52] Income Tax Act 1994, s CG 17.

[53] Income Tax Act 1994, ss CG 20 and CG 21 respectively.

[54] The accounting profits and branch equivalent methods relied on the underlying accounting details of the foreign entity. Both methods migrated to the second generation of the FIF rules in 2007 but did not stay long. The Taxation (International Investment and Remedial Matters) Act 2012, s 31 repealed the accounting profits method and replaced the branch equivalent method with the attributable FIF income method. ITA 2007, s EX 50, which contained the detailed operation of the branch equivalent method, now contains that of the attributable FIF income method.

[55] Income Tax Act 1994, s CG 19.

[56] ITA 2007, s EX 55 contains the DRR method, s EX 46(5) with reference to s EX 47, restricts the usage of the method to "non-ordinary shares" and non-ordinary shares are defined in s EX 46(10). See also infra Section III.C.2.

United Kingdom and the United States of America.[57] The original regime taxed interests in entities resident in grey list countries using New Zealand's domestic tax rules. This generally meant that the government taxed dividends as income but not the sale of shares and any capital gain thereof.[58]

The committee that devised the original FIF regime had concerns about broadly introducing an accrual tax because it was tantamount to a tax on capital, something New Zealand had never introduced.[59] They premised the exemption of the grey list on those countries' already high domestic tax rates.[60] The committee clearly stated that New Zealand should introduce a comprehensive domestic capital gains tax to remove tax advantages derived from positions in entities outside of low-tax jurisdictions.[61]

The rules first formulated in 1987 remained in force until 2007.[62] However, reform was afoot as early as the late 1990s.[63]

B. The second (and current) generation of FIF rules

1. Policy reformulation process

The original FIF rules heavily encouraged investment in grey list countries and heavily discouraged direct investment in other countries, even if they were not tax havens. Because domestic tax policy applied to those grey list holdings, New Zealanders only owed

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[57] Income Tax Act 1994, sch 3 pt A.
[58] Assuming the capital gain fell outside of the provisions in ITA 2007, ss CB 1-CB 4. See also the same sections in the Income Tax Act 2004 (NZ).
[59] Valabh et al., "International Tax Report Part 1," at [1.5.7].
[60] Valabh et al., at [2.2].
[61] Valabh et al., at [3.1.2]-[3.1.3].
[62] Taxation (Savings Investment and Miscellaneous Provisions) Act 2006 (NZ).
[63] Andrew M. C. Smith and David G. Dunbar, "Taxation of Offshore Portfolio Investment by New Zealand Residents: New Foreign Investment Fund Rules," *Bulletin for International Taxation* 61, no. 6 (2007): 248, at [4].

tax on income received, not capital gain accrued (or realized).[64] Anyone directly holding a minority interest in a non-grey list entity without access to that entity's detailed accounts would owe tax on accrued economic income each year as if it were ordinary income.[65]

The original rules had many flaws that made them ripe for planning. Due to the lack of look-through rules, New Zealand taxpayers could invest in grey list entities that then invested in entities resident outside of the grey list.[66] In fact, one of the most common (and legal) schemes consisted of New Zealanders investing in grey list entities holding New Zealand Government Bonds, resulting in risk-free economic gain with a minimal effective tax rate.[67] Domestically, the full return from debt instruments is subject to tax which the issuer withholds.[68] However, under the first generation of FIF rules, taxpayers could shelter such income-producing assets within grey list entities to indefinitely defer or near-totally avoid tax on a risk-free rate of return.[69]

Such schemes invariably frustrated the domestic fund management industry. Firstly, domestic fund managers were losing business to foreign fund managers given the offshore tax advantages. Secondly, prior to enactment of the portfolio investment entity rules,[70] New

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[64] Income Tax Act 2004 (NZ), ss CB 1-CB 4.

[65] Income Tax Act 1994 (NZ), s CG 18.

[66] Dunbar, "A Historical Review of the CFC & FIF Regimes: Part One 1987 to 1 December 2003," 49–50, at [6.4].

[67] Since 1991 New Zealand has exempted issuers from withholding non-resident withholding tax on interest payments through the so-called approved issuer levy ("AIL") regime. If the issuer is an "approved issuer", has registered the security with Inland Revenue, the issuer can pay a levy of two percent each time it pays interest to a non-resident. For more on the current AIL regime see Elliffe, *International and Cross-Border Taxation in New Zealand*, 648–49, at [31.4].

[68] ITA 2007, ss RE 2(1)(a) and BE 1(2).

[69] The interplay between New Zealand's rules for interest paid to non-resident lenders and Australia's trust rules for non-Australian-sourced income paid non-resident beneficiaries created a near-perfect tax shelter. For more detail on such arrangements, see Dunbar, "A Historical Review of the CFC & FIF Regimes: Part One 1987 to 1 December 2003," 47–49, at [6.4].

[70] Enacted in conjunction with the FIF rules, the portfolio investment ("PIE") rules offered certain benefits to fund managers and unit trusts investing in domestic and foreign entities on behalf of clients. See Smith and Dunbar, "Taxation of Offshore Portfolio Investment by New Zealand Residents," 250–51, at [5.1].

Zealand fund managers generally accounted for investment gains as business income.[71] This provided a significant tax advantage to individuals investing directly in grey list entities, including via grey list fund managers. Unsurprisingly, the New Zealand fund management industry lobbied for change in the lead up to New Zealand's Tax Review 2001.[72]

The McLeod Committee reviewed New Zealand's entire tax system and released its final report in 2001.[73] Given the planning opportunities the grey list exemptions introduced, the committee recommended removing the exemptions and replacing the onerous CV method default with a risk-free rate method ("RFRM").[74] The RFRM would set a risk-free rate each period. Taxpayers would multiply the market value of their assets by the risk-free rate per period. That amount would be deemed income on which taxpayers would pay income tax. It is no coincidence that this looks like the FDR method but with a variable rate each period. The FDR method evolved directly out of the RFRM proposal, albeit over a long and winding timeline.[75]

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[71] Income Tax Act 2004 (NZ), ss CB 1-CB 4.
[72] Smith and Dunbar, "Taxation of Offshore Portfolio Investment by New Zealand Residents," 247–48 at [3.6].
[73] McLeod et al., "Tax Review 2001: Final Report."
[74] McLeod et al., 29 at [8.73].
[75] New Zealand Inland Revenue Department, "Taxation of Non-Controlled Offshore Investment in Equity" (Wellington: Policy Advice Division of the Inland Revenue Department, December 2003), https://www.taxpolicy.ird.govt.nz/-/media/project/ir/tp/publications/2003/2003-ip-offshore-investment-equity/2003-ip-offshore-investment-equity-pdf.pdf, archived at https://perma.cc/P96Q-P3XS; Stobo, "Towards Consensus on the Taxation of Investment Income"; New Zealand Inland Revenue Department, "Taxation of Investment Income." For an excellent commentary on the sparring between various parties between the Tax Review 2001 and the introduction of the Bill see Smith and Dunbar, "Taxation of Offshore Portfolio Investment by New Zealand Residents," 248–50, at [4.2]-[4.4].

2. The legislative process

After six further years of discussion, consultation and reports, a version of the McLeod Committee's recommendation on FIF regime reform finally became a Bill.[76] Minister of Finance, Michael Cullen, announced the proposal to amend the FIF rules in his 2005 Budget Speech.[77] On 16 May 2006 Minister of Revenue, Peter Dunne, introduced the Bill to the House.[78] The Bill received thousands of submissions from the public. The Select Committee responsible for considering submissions commented that the number of submissions was unprecedented for a tax Bill.[79] Many submissions derided the proposed regime for taxing assets in years of economic loss.[80] As a result of these submissions, the Select Committee proposed amendments to the Bill allowing individuals and family trusts to choose between the FDR or CV methods for any given year.[81] On 18 December 2006

[76] "Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2)" (2006), https://bills.parliament.nz/v/Bill/1002cdec-56d6-468c-84d7-7218c54e047b, archived at https://perma.cc/8CWK-3M26.

[77] Michael Cullen, "Budget Speech 2005" (Wellington: Government of New Zealand, May 19, 2005), https://www.treasury.govt.nz/sites/default/files/2007-09/spch05.pdf, archived at https://perma.cc/B5KE-ZQFU.

[78] Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2).

[79] "Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2) (Select Committee Interim Report)," 2. By the time the Select Committee issued their final report, they had "received and considered 3,404 submissions from interested groups and individuals". "Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2) (Select Committee Final Report)," December 5, 2006, 42, https://www.parliament.nz/resource/en-NZ/48DBSCH_SCR3596_1/572d8d9c88b3771962dd404d7c4a684c6959009a, archived at https://perma.cc/32EW-EUZL.

[80] "Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2) (Select Committee Interim Report)," 3.

[81] "Taxation (Annual Rates, Savings Investment, and Miscellaneous Provisions) Bill 2006 (48-2) (Select Committee Final Report)," 5.

the Governor-General granted the Bill royal assent and the second generation of the FIF regime became law.[82]

III. CRITIQUE

A. Liquidity

1. Overview of the liquidity problem

The biggest problem with the FIF regime is that it makes no allowance for assets that have little to no liquidity. The classic modern example is shareholding in venture-backed startup companies. Startup companies regularly restrict the sale and purchase of shares, both common and preference classes.[83] Generally, that means a shareholder is legally prevented from selling or transferring shares until a specified liquidity event—usually an initial public offering or private sale.[84]

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[82] Parliament divided the Bill before enactment to separate the administrative annual rate setting components from the significant substantive overhauls to the tax system and ultimately enacted the "Taxation (Savings Investment and Miscellaneous Provisions) Act 2006," accessed April 7, 2024, https://www.legislation.govt.nz/act/public/2006/0081/latest/whole.html#DLM398970, archived at https://perma.cc/S3PV-5P5G. This Act amended the Income Tax Act 2004. The New Zealand Government completed its 15-year project of rewriting the Income Tax Act using plain drafting in 2007, culminating in the Income Tax Act 2007. The second generation of FIF rules enacted 10 months prior remained substantively identical in the Income Tax Act 2007 albeit with new section numbers. For more on the project see Parliament's press release Peter Dunne, "Parliament Passes Massive Re-Written Tax Law | Beehive.Govt.Nz," Beehive.govt.nz, October 26, 2007, https://perma.cc/S982-FVVZ. For an overview and analysis of the completed project, see Adrian Sawyer, "Rewriting Tax Legislation - Can Polishing Silver Really Turn It into Gold?," *Journal of Australian Taxation* 15, no. 1 (2013): 5–9 at [2.1].

[83] The distinction between common and preference shares in venture-backed startups is important. All venture-backed startups have a high chance of failure. Founders or boards can declare failure and wind up a company while it still has liquid or sellable assets. The amount of capital raised will almost always exceed the net assets of the company at the point of failure. In such a case, creditors and preferred shareholders have a higher claim to the distribution of the proceeds of those assets on the winding up of the company. Given this, and the unlikelihood of common shareholders receiving anything for their shares upon failure, the present value of preference shares in early- to mid-stage startups is always higher than common shares. A liquidation event is described as "not clearing the preference stack" when the last-in-line common shareholders receive nothing. This preference to be paid first also means that preferred shares' value more closely follows the price paid for future preferred share issues, whereas common shares follow a more typical asset or discounted cash flow valuation approach with a heavy discount for risk and lack of marketability.

[84] The legal restrictions are usually either contractual restrictions in the share sale and purchase agreement between the corporation and the shareholder, or corporate constitution or bylaw provisions.

This presents two issues. Firstly, it distorts the market by disincentivizing existing New Zealand tax residents from investing in illiquid offshore assets even if such an investment would be the best option for their portfolio on a pre-tax basis.[85] Secondly, and more seriously, it deters people who own illiquid assets from becoming New Zealand tax residents.[86]

Risk tolerant New Zealand tax residents with liquid offshore assets can liquidate precisely enough of their offshore portfolio each year to pay the tax they owe on that portfolio. Slightly more risk averse taxpayers can rebalance their portfolio annually into low-risk or risk-free income-producing assets to guarantee cashflow to pay the tax on their risky offshore assets. As I demonstrate in Sections III and IV, the default rules are tantamount to taking a one-year fixed-rate loan from the government every year and investing the loan principal in risky assets. Effectively, without rebalancing, taxpayers assessed under the FDR method are leveraging their portfolio on the back of the government's balance sheet.[87] Generating a guaranteed return by rebalancing into fixed income assets to pay (and therefore neutralize) the loan is still a position in which the taxpayer takes on significantly more private risk than rebalancing for equivalence with an ex post income tax.[88] Later in this section I provide examples of how a taxpayer holding liquid foreign securities can rebalance to share the upside and downside risk with the government equivalent to an ex post income tax with full loss offsets.

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[85] This is contrary to the claimed legislative intent of neutrality. See supra note 7.
[86] See the appendix of interviews with people who decided not to become (or remain) full New Zealand tax residents in Wilson and Fry, "The Place Where Talent Does Not Want to Live: The Intersection of New Zealand Immigration and Tax Policies in a Globalising World."
[87] I explain this infra Section IV.A.1.
[88] For the seminal discussion of government risk sharing including adjustments in private, public and total risk in a proportional income tax system with full loss offsets see Domar and Musgrave, "Proportional Income Taxation and Risk-Taking."

Potential New Zealand immigrants subject to foreign jurisdictions will have inevitably arranged their affairs according to the tax laws in their current jurisdiction. In many cases this means taking advantage of indefinite deferral of capital gains tax by avoiding realization.[89] This raises several barriers for immigrants to New Zealand. Firstly, taxpayers who can or want to lose their prior tax residency upon migration to New Zealand will likely owe an exit tax on any accrued capital gains.[90] Secondly, taxpayers who retain their original tax residency, despite avoiding an exit tax, will need to account for taxable events in that original jurisdiction when rebalancing their portfolios or liquidating assets to pay the New Zealand FIF taxes. Thirdly, foreigners with a large proportion of their net worth in illiquid assets may face an insurmountable barrier: an unaffordable tax bill and no way to rebalance to afford it.

Below, I present moderately stylized hypothetical accounts of New Zealand taxpayers. Firstly, I compare how the liquidity of offshore assets affects existing New Zealand tax residents. Secondly, I demonstrate how, due to illiquid holdings, a New Zealand expatriate might face an insurmountable tax barrier preventing him from moving home to New Zealand.

2. How liquidity affects rebalancing for New Zealand residents

People investing in liquid securities can rebalance their foreign portfolios every year. People who want to achieve the exact same result as an ex post (economic) income tax can do so, assuming they can readily buy and sell the securities they hold.[91] Under the

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[89] As Joseph Stiglitz stated, "[t]he present discounted value of a postponed tax is much less than that of a tax currently paid." Joseph E. Stiglitz, "The General Theory of Tax Avoidance," *National Tax Journal* 38, no. 3 (September 1985): 327.

[90] See, for example, the deemed capital gain realization rules for Australian residents ceasing to be residents. Income Tax Assessment Act 1997 (Cth) s 104.160 (Austl.).

[91] Kaplow, "Taxation and Risk Taking."

New Zealand system people could rebalance their risky and risk-free asset mix once a year to achieve equivalence. With appropriate rebalancing, total economic loss of the risky asset would leave the taxpayer in the same position as they would be in an ex post income tax system with full loss offsets.[92] This rebuts the common critique that universal application of the FDR method "levies taxes upon economic losses".[93] With active rebalancing, the government shares in both upside and downside risk with the taxpayer proportionate to the tax rate.[94]

On the other hand, people with illiquid securities cannot easily rebalance those securities. When the value of taxpayers' liquid securities increases, they can sell down some of those liquid assets to fund the rebalancing into risk-free assets. However, when illiquid securities increase in value taxpayers would have to introduce capital from somewhere other than the illiquid assets to balance them and reach equivalence.

Compare the examples below balancing $100,000 invested in offshore liquid assets versus the same amount in illiquid assets. Let's assume for each example that the assets have been acquired in the 2021-2022 tax year,[95] their fair market values as of 31 March 2022 were each exactly $100,000,[96] and the taxpayer is in the highest marginal tax bracket

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[92] This proposition assumes the asset's jurisdiction of residence does not levy capital gains tax on the sale of the asset by a non-resident. Selling foreign securities may trigger a taxable event in the foreign jurisdiction if that jurisdiction taxes capital gains upon realization and it is the type of property that the foreign jurisdiction taxes based on source rather than residence (e.g. real property). In most cases, the capital gains on listed public securities are taxable only in the country in which the taxpayer is resident. This is enshrined in Article 13(5) of the OECD Model Tax Convention. Organisation for Economic Co-operation and Development. *Model Tax Convention on Income and on Capital* (2017).

[93] This critique was so prominent in the submission process on the FIF rules that Parliament allowed taxpayers to alternate between the FDR and the CV methods to prevent perceived over-taxation in years of economic loss. See supra note 81.

[94] Domar and Musgrave, "Proportional Income Taxation and Risk-Taking"; Kaplow, "Taxation and Risk Taking."

[95] This means that no tax would be due on these assets for the 2021-2022 tax year. See supra note 31.

[96] For the FDR method, assuming the liquid assets consisted of publicly listed securities, this would be the closing middle market valuation of those shares per ITA 2007, s YA 1 "market value" para (a). For the cost method, this assumes an independent valuer valued the asset(s) at that date per s EX 56(3)(b).

of 39 percent. In these first examples, let us assume that the rate of return on both the liquid and illiquid risky asset is 20 percent per annum in all years.

In the tables below, the "tax on capital" column multiplies the prior year's liquid risky asset balance by five percent, then by the taxpayer's 39 percent tax rate.[97] The "tax on income" column multiplies the earnings on the risk-free asset by the 39 percent tax rate. In the "post-tax" rows, we assume the taxpayer pays the total tax burden from the risk-free asset.[98]

		Risk-free asset	Liquid risky asset	Total value	Tax on income	Tax on capital	Total tax
31-Mar-22	initial balance	$0	$100,000	$100,000	-	-	-
31-Mar-22	post-balancing	$39,000	$61,000	$100,000	-	-	-
31-Mar-23	pre-tax	$40,950	$73,200	$114,150	$761	$1,190	$1,950
31-Mar-23	post-tax	$39,000	$73,200	$112,200	-	-	-
31-Mar-23	post-balancing	$43,758	$68,442	$112,200	-	-	-
31-Mar-24	pre-tax	$45,946	$82,130	$128,076	$853	$1,335	$2,188
31-Mar-24	post-tax	$43,758	$82,130	$125,888	-	-	-

Given the liquidity of the asset in the first example, the taxpayer can sell down $39,000 of it[99] and invest the proceeds in a one-year government bond.[100] The government bond will produce precisely enough income ($\$39{,}000 \times 5\% = \$1{,}950$) after one year to pay the tax on its own income ($\$1{,}950 \times 39\% = \$761$) plus the deemed income from the risky asset ($\$61{,}000 \times 5\% \times 39\% = \$1{,}190$). On the first day of the following tax

[97] This is simply application of the FDR method under ITA 2007, s EX 52(3).

[98] The asset column from which the taxpayer pays the tax is moot since the taxpayer immediately rebalances both assets after paying the tax.

[99] $asset\ value \times tax\ rate$

[100] Note, this assumes that the one-year government bond and the deemed income rate are the same, which is not the case in the current regime. See Sections III.C.2 and IV.A for reasons the deemed rate for the annual fair dividend rate should be pegged to the one-year government bond rate. In the absence of such a change, the equivalence does not hold and the rebalancing formula is slightly different and less elegant: given some wealth, y, to be balanced between risky and risk-free assets, and given the risk-free rate of return, r, and the deemed income rate, d, the formula to balance investment such that the income from the risk-free asset pays the tax on the risky asset is $\frac{yr(1-t)}{r(1-t)+td}$

year, the taxpayer can then take the cumulative total of the growth in the risky asset together with the redemption value of the bond and balance them in the same way for the current tax year.

Contrast this to a taxpayer who has already invested $100,000 in an illiquid risky asset. The taxpayer has no opportunity to sell down the asset and reapportion its value to a risk-free asset.

		Risk-free asset	Illiquid risky asset		Aggregate actual value	Tax (interest)	Tax (FIF)	Total tax
		Actual value	Deemed value	Actual value				
31-Mar-22	initial balance	$0	$0	$100,000	$100,000	-	-	-
31-Mar-22	post-balancing	$63,934	$100,000	$100,000	$163,934	-	-	-
31-Mar-23	pre-tax	$67,131	$105,000	$120,000	$187,131	$1,247	$1,950	$3,197
31-Mar-23	post-tax	$63,934	$105,000	$120,000	$183,934	-	-	-
31-Mar-23	post-balancing	$67,131	$105,000	$120,000	$187,131	-	-	-
31-Mar-24	pre-tax	$70,488	$110,250	$144,000	$214,488	$1,309	$2,048	$3,357
31-Mar-24	post-tax	$67,131	$110,250	$144,000	$211,131	-	-	-

Given this, to achieve the same balance with the liquid asset, the taxpayer must find additional (outside) capital to invest in the risk-free asset to pay the tax on the deemed income of the risky asset. In our case of a $100,000 investment, the holder of the illiquid asset needs to come up with an additional $63,934[101] to invest in the risk-free asset for it to produce sufficient after-tax income to pay the tax on the risky asset. Given the deemed value of the illiquid asset increases by five percent each year under the cost method,[102] to maintain the appropriate balance, the taxpayer would need to introduce outside capital at a rate of five percent of the risk-free asset's value every year.

You, the reader, might astutely point out that a well-informed New Zealand taxpayer could have balanced his initial illiquid risky investment using the mechanism

[101] $\frac{yt}{1-t}$

[102] ITA s EX 56(4).

outlined for the liquid asset. This is true, but whereas the liquid investor can indefinitely rebalance assuming continued liquidity, the illiquid investor has only the initial purchase as an opportunity to balance and no ability to rebalance without outside capital. Given this, let us repaint this more charitable table of one-time balancing.

		Risk-free asset	Illiquid risky asset		Aggregate actual value	Tax (interest)	Tax (FIF)	Total tax
		Actual value	Deemed value	Actual value				
31-Mar-22	initial-balancing	$39,000	$61,000	$61,000	$100,000	-	-	-
31-Mar-23	pre-tax	$40,950	$64,050	$73,200	$114,150	$761	$1,190	$1,950
31-Mar-23	post-tax	$39,000	$64,050	$73,200	$112,200	-	-	-
31-Mar-24	pre-tax	$40,950	$67,253	$87,840	$128,790	$761	$1,249	$2,009
31-Mar-24	post-tax	$38,941	$67,253	$87,840	$126,781	-	-	-
31-Mar-25	pre-tax	$40,888	$70,615	$105,408	$146,296	$759	$1,311	$2,071
31-Mar-25	post-tax	$38,817	$70,615	$105,408	$144,225	-	-	-

In this more charitable version, our well-informed taxpayer, having $100,000 to invest, invests $61,000 in an illiquid risky offshore asset and the remaining $39,000 in a one-year government bond. This assumes that the value of the taxpayer's illiquid risky investment will not fluctuate between the time at which he invests and the time at which an independent valuer values it.[103]

While the taxpayer manages to afford the first year of cost method taxation on his illiquid asset through his initial balancing, any further balancing cannot use the reallocation mechanism we used for the liquid asset. Despite the initial balancing, without outside capital the taxpayer is still left with a diverging balance between the risky and risk-free assets. The naïve taxpayer failing to balance an illiquid foreign asset upon purchase presents a starker problem. However, the well-informed initial-balancing taxpayer still

[103] If the taxpayer invested $61,000 in an illiquid risky asset on 2 April 2021 and then commissioned an independent valuation of that asset in April 2022 the asset could be worth significantly more or less than $61,000 and that independent valuation would set the basis for the "opening value" under the cost method. If an independent valuer values the asset significantly higher than $61,000 then the taxpayer would be significantly underinvested in risk-free assets such that they would produce insufficient income to pay the tax bill on the risky asset even in the first year.

must find a source of outside capital to fund a five percent increase in the risk-free investment to pay each coming year's tax bill on the risky asset. A well-informed taxpayer whose risky asset is valued higher than its initial purchase price will fall somewhere between these two cases.[104]

The downside is still a problem, albeit less of a problem, for the illiquid risky asset. If the asset decreases significantly in value, the taxpayer can obtain another independent valuation every five tax years, thereby resetting the deemed value under the cost method. At the resetting of value, the taxpayer can accordingly rebalance the risk-free allocation of capital downward.

During the legislative process, the New Zealand public expressed severe animosity towards the possibility of having deemed income in a year that they experienced a net economic loss in their foreign portfolio.[105] Given this, it is worth demonstrating the effect of rebalancing in loss years and comparing liquid and illiquid foreign portfolios. Consider similar scenarios to those above but with a 20 percent year over year loss instead of gain.

		Risk-free asset	**Liquid risky asset**	**Aggregate value**	**Tax (interest)**	**Tax (FIF)**	**Total tax**
31-Mar-22	post-balancing	$39,000	$61,000	$100,000	-	-	-
31-Mar-23	pre-tax	$40,950	$48,800	$89,750	$761	$1,190	$1,950
31-Mar-23	post-tax	$39,000	$48,800	$87,800	-	-	-
31-Mar-23	post-balancing	$34,242	$53,558	$87,800	-	-	-
31-Mar-24	pre-tax	$35,954	$42,846	$78,801	$668	$1,044	$1,712
31-Mar-24	post-tax	$34,242	$42,846	$77,088	-	-	-

[104] A very well-informed taxpayer who knows his investment horizon for illiquid assets can determine the total tax due over the multiple periods (since the deemed value grows a fixed five percent every year) and allocate sufficient capital to either a bond or an annuity that perfectly covers the tax burden over the life of the investment.

[105] See supra note 80.

The combined value of risky and risk-free assets on 31 March 2023 is $87,800. With that entire sum invested exclusively in the risky asset, the loss by 31 March 2024 would be $17,560. That is, a full economic loss of 20 percent. However, given the rebalancing strategy's equivalence to a full loss offset system, the government shares in 39 percent of the downside risk. Hence the economic loss is only $10,712 (aggregate value at 31 March 2024 post-balancing minus aggregate value at 31 March 2023 post-tax). This results from the underlying capital in the risk-free asset not losing (or gaining) value.

A more extreme illustration of divergence of equivalence between the FDR method and cost method is a sudden total economic loss of the risky asset after many years of growth.[106] Consider the same rebalancing strategy as above for the liquid risky foreign asset. Assume that it grows 20 percent year over year but in the fifth year, the value of the risky asset falls to zero.

		Risk-free asset	**Liquid risky asset**	**Aggregate value**	**Tax (income)**	**Tax (FIF)**	**Total tax**
31-Mar-22	post-balancing	$39,000	$61,000	$100,000	-	-	-
…	…	…	…	…	…	…	…
31-Mar-26	post-tax	$55,086	$103,393	$158,479	-	-	-
31-Mar-26	post-balancing	$61,807	$96,672	$158,479	-	-	-
31-Mar-27	pre-tax	$64,897	$0	$64,897	$1,205	$1,885	$3,090
31-Mar-27	post-tax	$61,807	$0	$61,807	-	-	-

After four years of growth and rebalancing, the combined value of risky and risk-free assets on 31 March 2026 is $158,479. By 31 March 2027, the $96,672 worth of risky asset is entirely wiped out. However, $61,807 of capital remains in the risk-free asset. So, instead of an economic loss of 100 percent, once again, $61,807 of $158,479 remains, or 39 percent—the government's share of the risk on the downside.

[106] This is an entirely plausible outcome for highly risky assets, especially illiquid startup stock as suggested earlier.

Compare this to the same growth and failure trajectory for investors in an illiquid risky foreign asset. Assume the taxpayer initially balances between risky and risk-free assets but introduces no other outside capital to rebalance over the years.

		Risk-free asset	Illiquid risky asset		Aggregate	Tax	Tax	Total
		Actual	Deemed	Actual value	actual value	(interest)	(FIF)	tax
31-Mar-22	post-balancing	$39,000	$61,000	$61,000	$100,000	-	-	-
...	...	...	...	...	...	...	...	...
31-Mar-26	post-tax	$38,624	$74,146	$126,490	$165,113	-	-	-
31-Mar-27	pre-tax	$40,555	$0	$0	$40,555	$753	$1,446	$2,199
31-Mar-27	post-tax	$38,356	$0	$0	$38,356	-	-	-

By 31 March 2026, the inability to rebalance has caused a gap between the risk-free asset and the deemed value of the risky asset. The risk-free asset made up 39 percent of the original aggregate value. Without the ability to rebalance, the risk-free asset was only worth 34 percent of the deemed aggregate value over four years. However, the divergence between the risk-free asset value and the actual value of the risky asset is even greater. The risk-free asset only makes up 23 percent of the total actual value of the risk-free asset and risky asset. So, whereas through annual rebalancing, the liquid investor mitigates downside risk to the tune of 39 percent versus only 23 percent for the illiquid investor.

The examples above show that taxpayers investing in liquid foreign assets can balance between risky and risk-free assets not only to afford their annual FIF tax bill but also share the economic downside risk with the government. While the economic risk sharing is not the same for investors in illiquid foreign assets, investors making net new illiquid investments can still rebalance to afford their FIF tax bill.[107] However, this is not the case for migrants to New Zealand.[108]

[107] Although, see supra note 104 when a taxpayer knows their illiquid investment horizon.

[108] Nor is it the case for New Zealand residents who have failed to rebalance their investment from the outset unless they have sufficient outside capital to introduce for the balancing ex post.

3. How lack of liquidity deters entrepreneurial migrants

To see how New Zealand deters the type of talent it wishes to attract, consider a fictional example of a New Zealand-born entrepreneur.[109]

Hamuera is an expatriate New Zealander and a naturalized US citizen. He is a serial entrepreneur with deep expertise in artificial intelligence. After his PhD in computer science at Stanford University, he joined Google in 2005. In 2010, Hamuera and two of his colleagues left Google and founded their own fintech company. In 2013, Hamuera's fintech company was acquired and Hamuera realized a capital gain of $10,000,000. Between 2014 and 2019, Hamuera angel-invested $4,000,000 directly across 40 companies ranging from pre-seed to Series A. In 2017, after Google researchers published the seminal paper *Attention Is All You Need*,[110] Hamuera founded a new startup with two other past colleagues, focusing on cutting edge applications of generative artificial intelligence. Between 2018 and 2021, Hamuera and his team raised $100,000,000 in venture capital from pre-seed to Series B.

COVID-19 restricted all Hamuera's employees to working from home for most of 2020. He decided to relocate himself and his immediate family to New Zealand in March 2021 and work US west coast hours given that the time difference only ranged from between three and five hours. This allowed Hamuera to be closer to his New Zealand extended family. Hamuera also had an interest in moving back to New Zealand

[109] Wilson and Fry provide evidence of real people in situations similar to this fictional example. Wilson and Fry, "The Place Where Talent Does Not Want to Live: The Intersection of New Zealand Immigration and Tax Policies in a Globalising World."

[110] Ashish Vaswani et al., "Attention Is All You Need," *CoRR* abs/1706.03762 (2017), http://arxiv.org/abs/1706.03762.

permanently for the lifestyle and to give back to the New Zealand startup and entrepreneurship ecosystem.

Hamuera became a New Zealand tax resident on 1 March, 2021. He is a transitional tax resident and is exempt from the FIF rules for four years.[111] He loses his transitional tax status on 1 March, 2025. As the end of his transitional status draws near, he has a choice to make: remain in New Zealand and let the FIF rules apply or return to the United States where he can continue to hold his shares with no tax consequence until realization.

The fair market value of Hamuera's shares based on the company's last 409A valuation is $40,000,000 USD. Of the startups in which Hamuera angel-invested, 30 remain in business. The cumulative fair market value of Hamuera's interest in those companies is $30,000,000. He does not expect any of the companies in his portfolio, including his own, to experience a liquidity event within the next four years.

Hamuera speaks with an independent valuer in New Zealand about having his portfolio professionally valued. The valuer indicates that the common stock Hamuera holds in his own company might deserve a discount to around $30 million, but there's no way to discount his angel portfolio lower than $30 million. Hamuera will need to pay more than $50,000 to have his portfolio of private companies properly valued.

Suddenly, Hamuera looks a lot like our naïve New Zealand tax resident who did not balance his portfolio upon acquisition of illiquid foreign assets. Hamuera holds roughly $60 million in illiquid foreign risky assets. It is understandable that he did not balance into risk-free assets to pay some future theoretical New Zealand deemed income tax. In any

[111] ITA ss HR 8(2) and EX 64(3).

case, the capital value of his own current startup on paper is attributed to his own labor, not financial capital he laid out (and could balance) at the outset.

Sixty million dollars of illiquid foreign assets deems three million dollars of annual income resulting in a tax bill of $1.17 million. Given the cost method ratchet rules, these figures increase by five percent each year absent a lower independent valuation, for which Hamuera would not be eligible until 2030.

We want people like Hamuera in New Zealand. We want Hamuera to bring his financial and experiential wealth back to New Zealand. We want Hamuera to convince his past and current colleagues and friends to move to New Zealand to start new businesses. But Hamuera does not have sufficient cash flow to live in New Zealand under these rules; nor do many of his US friends and colleagues.[112]

Hamuera and his family decide to move back to the United States, lose their New Zealand tax residency and visit New Zealand for five months every year so as not to trigger New Zealand tax residency rules.

B. Valuation, Volatility and Lock-In

The problem with the cost method is that, unlike the FDR method, it does not track the true underlying value of the assets it taxes. Furthermore, hard-to-value assets are often volatile, experiencing higher highs and lower lows than the total public market. The ability for taxpayers to reset the deemed value under the cost method every five years, this

[112] One might ask whether anyone might lend Hamuera the seven-figure tax bill each year if he posts the underlying shares as collateral. While this strategy may be feasible in some cases, in most cases lenders will likely refuse to accept the shares as collateral given their inherent transfer restrictions. That is, given the restrictions on the shares at either the contractual or corporate level, it may be impossible for potential creditors to perfect a security interest over the shares. This would likely result in either extremely high interest rates (and essentially an unsecured loan) or refusal to lend altogether.

volatility can further exacerbate divergent actual to deemed values. If a taxpayer manages to reset the deemed value of a highly volatile asset at the bottom of a dip, that divergence would produce an incredibly strong lock-in effect.[113] Independent of value resets, an asset that grows exponentially will quickly diverge from its deemed value.

A large divergence would incentivize the taxpayer not only to hold the asset, but to engineer a situation in which the asset remains hard to value for a longer term. This is because if, at the wide divergence, the asset experiences some type of liquidity event or becomes easy to value (for example, private company stock lists on a public exchange), then the legislation forces the taxpayer to use the FDR method for the next period. This forced transition from the cost method to the FDR method could result in an extreme discrete jump in taxation from one year to the next.

Take the example below.

	Illiquid risky asset		**Tax**	
	Deemed value	**Actual value**	**Cost method**	**FDR**
31-Mar-24	$100,000	$100,000		
31-Mar-25	$105,000	$300,000	$1,950	$1,950
31-Mar-26	$110,250	$900,000	$2,048	$5,850
31-Mar-27	$115,763	$1,800,000	$2,150	$17,550
31-Mar-28	$121,551	$3,600,000	$2,257	$35,100
31-Mar-29	$127,628	$7,200,000	$2,370	$70,200
31-Mar-30	$134,010	$8,640,000	$2,489	$140,400

Consider a New Zealand taxpayer in the 39 percent tax bracket who invests $100,000 in a United States software-as-a-service ("SaaS") startup in the 2023-2024 tax

[113] The fact that the cost method encourages lock-in arose during a conversation with Louis Kaplow in his office regarding a very early draft of this paper on 5 March 2024. In that conversation, Professor Kaplow noted the lock-in effects of California's 1978 Proposition 13 property tax increase maximums and New York City's rent control regime. In that same conversation I proposed that the federal Qualified Small Business Stock regime might (inadvertently) act as a countermeasure to the inherent lock-in effect of the United States' capital gains tax regime and the ability to indefinitely defer tax by simply holding an asset.

year. The company successfully carries out the so-called "T2D3" SaaS strategy of tripling annual revenue growth in the first two years and then doubling growth in the next three years. We assume that private valuation follows revenue growth and valuation grows 20 percent in year six.[114] If the value of the company were easily ascertainable each year, the taxpayer's deemed income under the FDR method would increase in line with the increase in value.

However, as we can see in our example, our taxpayer is quite happy paying $2,489 of tax under the cost method for an asset that he values privately at $7,200,000 but that the cost method deems is worth $127,628. Here we see the power of lock-in. If the company were to list itself on a public exchange in the 2029-2030 tax year and our taxpayer continues to hold his shares, he will owe six figures of tax under the FDR method. This extreme jump (from a $2,489 tax bill to a $168,480 tax bill)[115] produces what I call a "double lock-in effect"—that is, taxpayers are incentivized not only to hold an asset, but to maintain the illiquidity or hard-to-value nature of the asset.

By their nature, the FIF rules exclude interests in which the taxpayer has control of the underlying asset or business—the CFC rules apply in that case.[116] Given this, it would be hard for a taxpayer to exert influence as to when a cost method asset transitioned from hard-to-value to easy-to-value. Despite this, the fixed-deemed-value-increase mechanics of the cost method might be enough to incentivize taxpayers to invest in hard-to-value

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[114] While revenue is not free cashflow and there would likely be a significant discount for risk, top line revenue multiples are often used in valuing early-stage growth startups and thus the private valuation of a company often grows in line with its revenue growth. For a commentary on private startup valuations based on revenue multiples from a leading venture capital firm, see David George and Alex Immerman, "When Entry Multiples Don't Matter," Andreessen Horowitz, August 17, 2020, https://a16z.com/when-entry-multiples-dont-matter/, archived at https://perma.cc/A97D-A2B9.

[115] Assuming, when trading publicly, the taxpayer's shares are worth $8,640,000, then the tax liability under the FDR method will be $8{,}640{,}000 \times 0.05 \times 0.39$.

[116] ITA 2007, s EX 1.

foreign assets with long investment horizons, hoping to leverage the divergence between deemed and actual value to maximize after-tax gains.[117]

Ultimately, even if taxpayers can realize liquidity for hard-to-value assets assessed under the cost method,[118] the divergence will incentivize them to hold rather than sell those assets. Selling those assets and reinvesting in similar offshore equities (whether liquid or illiquid) will reset the taxpayer's basis (deemed value or opening value) to the actual value. At that point, the taxpayer would start paying tax on that increased capital value under the FDR method.

There are three counterarguments to this purported lock-in. Firstly, given the current New Zealand tax settings, if the taxpayer realized their extremely divergent cost method investment, they could reinvest the proceeds directly into capital investments domestically in New Zealand. In that case, the FIF rules would not apply and nor would any ex post capital gains tax.[119] Secondly, given the high volatility we assumed above, the taxpayer may want to de-risk his position by taking money off the table when the asset's values are divergent. The fact that an asset dipped so drastically at some point in the past may suggest that it could drop drastically again in the future (or even meet its fate at a value of zero). So, the inherently highly risky nature of cost method assets may mitigate the lock-in effect to some extent. Finally, a taxpayer who invests in a foreign active company and receives an interest greater than 10 percent can make use of the CFC rules' active business

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[117] Presumably, an offshore entity in a low tax jurisdiction could create an passive investment vehicle which artificially creates illiquidity and volatility as a product for the New Zealand market to optimize long term after-tax returns.

[118] For example, at times, the board of a venture-backed startup will approve some proportion of a venture fundraising round to be transacted through secondary share sales. That is, the board will allow existing shareholders holding otherwise illiquid shares to sell a small number to the new investors.

[119] New Zealand Inland Revenue Department, *High-Wealth Individuals Research Project Report* (Wellington: Policy and Regulatory Stewardship, Inland Revenue, 2023), 89 at [Table 12.1].

exemption.[120] As long as the company's income is no more than five percent passive then the rules consider it an active business, thereby exempt from the FIF rules and taxed under domestic rules.[121]

Despite these counterarguments, the cost method remains the most pernicious feature of the foreign investment fund rules. Diverging actual and deemed values punish either the government or the taxpayer and provide a windfall to the other.

C. Distortions and Planning Opportunities

The main thrust of this paper is to solve the FIF regime's liquidity issue. The liquidity issue intersects with other features of the regime which create market distortions and tax planning opportunities. I mention these briefly to add weight to their amendment; however, deep analysis of the following issues is beyond the scope of this paper.

1. The comparative value option incentivizes high volatility portfolios

The option to elect the comparative value method in years of loss encourages taxpayers to invest in more volatile portfolios. This distorts investment decisions and the market. Portfolios that experience more years of extreme highs and lows will have their highs capped for tax purposes at a five percent return, even if they make a 500 percent return. This also means that the frequency of down years will be greater than a lower volatility portfolio. Below, I present two ways to understand how volatility affects the effective tax rates on portfolios. Firstly, I present a historical comparative analysis of a high

[120] See Elliffe, *International and Cross-Border Taxation in New Zealand*, 296–97 at [14.7.5].
[121] ITA 2007, ss EX 21B, EX 21D, EX 21E, EX 46(3) and EX 50.

volatility portfolio versus a low volatility portfolio. Secondly, I use the Black-Scholes-Merton model to price the government's ex ante zero to five percent claim.[122]

The tables in Appendix A compare the performance of two FIF portfolios across the 10 tax years ending 2015 to 2024. Each portfolio exclusively contains a single exchange traded fund ("ETF") offered by Invesco—one with high volatility, the other with low volatility. The more volatile portfolio is known by its stock ticker "SPHB", standing for "S&P 500 High Beta".[123] The less volatile portfolio is known by its stock ticker "SPLV", standing for "S&P 500 Low Volatility".[124] Over the past 10 years, SPHB has had an average annual beta of 1.36 and volatility of 25.49 percent, whereas SPLV has had an average annual beta of 0.68 and volatility of 12.36 percent.[125]

In each hypothetical, two separate New Zealand taxpayers invest $100,000 each in SPHB and SPLV. These are the only FIF interests the taxpayers own. Both investors are risk tolerant in the sense that they do not rebalance into risk-free assets. To pay the tax due on their FIF portfolios, they sell down precisely enough shares in each ETF on 31 March of each year to pay the necessary tax.

As the tables demonstrate, a $100,000 investment in SPHB in 2014 would have grown to $273,182 after tax by 31 March 2024.[126] The SPHB portfolio taxpayer would

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[122] Fischer Black and Myron Scholes, "The Pricing of Options and Corporate Liabilities," *Journal of Political Economy* 81, no. 3 (1973): 637–54; Robert C. Merton, "Theory of Rational Option Pricing," *The Bell Journal of Economics and Management Science* 4, no. 1 (1973): 141–83, https://doi.org/10.2307/3003143.

[123] "Invesco | Product Detail | Invesco S&P 500® High Beta ETF," accessed April 12, 2024, https://www.invesco.com/us/financial-products/etfs/product-detail?audienceType=Institutional&ticker=SPHB, archived at https://perma.cc/3XUN-BTUX.

[124] "Invesco | Product Detail | Invesco S&P 500® Low Volatility ETF," accessed April 12, 2024, https://www.invesco.com/us/financial-products/etfs/product-detail?audienceType=Investor&ticker=SPLV, archived at https://perma.cc/5FZ4-82DZ.

[125] "Invesco S&P 500 High Beta ETF (SPHB) Risk - Yahoo Finance," accessed April 13, 2024, https://finance.yahoo.com/quote/SPHB/risk/; "Invesco S&P 500 Low Volatility ETF (SPLV) Risk - Yahoo Finance," accessed April 13, 2024, https://finance.yahoo.com/quote/SPLV/risk/.

[126] Including net dividend payments assuming 30 percent withholding tax at source.

have paid a total of $15,977 of tax across the 10 years. That is an effective tax rate of 8.45 percent.[127] By contrast, a $100,000 investment in SPLV would have grown to $238,906 after tax. That is an effective tax rate of 13.74 percent—a 63 percent higher effective tax rate than the higher volatility portfolio.

We can explain this divergence in effective tax rates in two ways. Firstly, as you can see in the SPHB table,[128] the portfolio experienced a loss in four out of 10 years and thus applied the CV method for zero tax burden 40 percent of the time. Contrast this with the SPLV table[129] in which the portfolio experienced a loss in two of 10 years and hence paid tax in eight rather than six of the years. Secondly, because SPHB experiences higher highs, the five percent cap on deemed income works in that portfolio's favor. Since SPLV's economic returns hew closer to the deemed five percent cap, that portfolio cannot take as much advantage of the "tax free" return above five percent.

We can see this second advantage by comparing SPHB and SPLV across 10 years in a world in which the FDR method applied exclusively.[130] In a world without CV method electability, the SPHB portfolio would have a 15.21 percent effective tax rate versus 18.53 percent for SPLV.[131] Historical returns suggest that the FDR/CV election option strongly incentivizes higher volatility portfolios.

Instead of looking at past performance, the other way to understand the distortive effect of the option to elect the FDR method or CV method is to examine the issue ex ante

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[127] Adding back the aggregate New Zealand tax payments to gross up the return.
[128] Appendix A Table 1.1 "Method" column.
[129] Appendix A Table 1.2 "Method" column.
[130] Appendix A Tables 1.3 and 1.4 "FDR" sections.
[131] Note, the disparity of return in excess of the risk-free rate for the government can be solved by the government rebalancing into risky assets to gain exposure to the upside. This mitigates the divergence of effective tax rates under the FDR method without CV method electability. See Kaplow, "Taxation and Risk Taking."

by pricing the future optionality to the present. Because the CV method does not allow deductible losses,[132] it protects the government from crediting the taxpayer in years of economic loss.[133] However, because the FDR method always deems exactly five percent of the value of the asset, that caps the government's upside. This pair of positions is like a pair of European call options:[134] the government sells a call option struck at five percent above the current price of the portfolio[135] and purchases a call option struck at the current price of the portfolio.[136] The resulting position is known as a bull call spread.

Using the Black-Scholes-Merton option pricing model to price each option, we can determine the present value of the pair of options. Assuming a five percent risk-free rate, no dividend and a volatility of 20 percent,[137] Black-Scholes prices the call option that the government writes at 8.02 percent of the initial asset value (the short call) and the call option the government buys at 10.45 percent of the initial asset value (the long call). Since the short call is a credit position and the long call is a debit position,[138] the result is a net debit position worth 2.43 percent of the initial value. Consider an asset currently trading at $100 with a volatility of 20 percent. Independent parties could pay $2.42 to enter into a bull call spread on that asset protecting losses below $100 but capping their gain at $105.

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[132] ITA 2007, s EX 51(8).

[133] A pure accrual tax as described by Domar and Musgrave would credit the taxpayer their economic loss multiplied by the tax rate. Domar and Musgrave, "Proportional Income Taxation and Risk-Taking."

[134] "European" because the options can only be exercised at expiry, not any time prior as is the case with "American" options.

[135] Otherwise known as a "short call".

[136] Otherwise known as a "long call". We must eventually multiply the results by a tax rate to understand the government's true stake. Progressive rates and the unknowability of a taxpayer's taxable income and tax rate ex ante complicate this.

[137] For comparison's sake, the total US stock market had an average annual volatility of 18.94 percent over the last five years versus small-cap stocks at 22.86 percent, as tracked by ETFs with stock tickers VTI and VB. "Vanguard Total Stock Market Index Fund ETF Shares (VTI) Risk - Yahoo Finance," accessed April 13, 2024, https://finance.yahoo.com/quote/VTI/risk/; "Vanguard Small-Cap Index Fund ETF Shares (VB) Risk - Yahoo Finance," accessed April 13, 2024, https://finance.yahoo.com/quote/VB/risk/.

[138] That is, a person buying a long call option pays the person writing the short call. The government has each a long and a short call option on taxpayers' foreign portfolios.

This shows that, priced at average global market volatilities, the government's ex ante deemed income claim is almost half the amount it is under the FDR method with no CV electability.[139] Furthermore, using Black-Scholes, we can see how the volatility of portfolios affects the price of the government's ex ante claim. Compare a common broad-market ETF which tracks the total US stock market, VTI,[140] with a common volatile ETF which triple-leverages the Nasdaq-100 index, TQQQ.[141] VTI has an annual average volatility of 18.94 percent, whereas TQQQ has an annual average volatility of 68 percent.[142] Black-Scholes prices the FDR/CV bull call spread on VTI at 2.45 percent of the initial price and TQQQ at 1.81 percent.

This simply shows, ex ante, a result like the one I demonstrated by reference to historical data. The opportunity for taxpayers to select between the FDR method and CV method in any given year incentivizes investment in more volatile portfolios and hence distorts the market.

2. Problems with fixing the fair dividend rate at five percent

The FIF regime defaults to the FDR method and the rate is fixed at five percent. This has two effects. Firstly, with no action on the part of taxpayers, their effective tax rate under the FDR method will vary based on how divergent the actual one-year risk-free rate

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[139] Compare the 2.43 percent ex ante deemed income under Black-Scholes to the 4.76 percent ex ante deemed income under the FDR method as calculated by $\frac{0.05}{1+0.05}$.

[140] "VTI-Vanguard Total Stock Market ETF | Vanguard," accessed April 18, 2024, https://investor.vanguard.com/investment-products/etfs/profile/vti, archived at https://perma.cc/5KSC-TKZJ.

[141] "TQQQ | UltraPro QQQ | ProShares," accessed April 18, 2024, https://www.proshares.com/our-etfs/leveraged-and-inverse/tqqq, archived at https://perma.cc/URX5-2EQM.

[142] "Vanguard Total Stock Market Index Fund ETF Shares (VTI) Risk - Yahoo Finance"; "ProShares UltraPro QQQ (TQQQ) Risk - Yahoo Finance," accessed April 19, 2024, https://finance.yahoo.com/quote/TQQQ/risk/.

is from five percent. Secondly, savvy taxpayers may be able to arbitrage the difference between the fair dividend rate and the risk-free rate.

I previously framed the FDR method as equivalent to the government implicitly loaning the taxpayer money at the start of the year and collecting the principal and interest at the end.[143] However, given this mechanism, the taxpayer's effective tax rate varies as the risk-free rate varies. Effectively, some portion of a taxpayer's foreign investment belongs to the government at the start of the year. The taxpayer just has use of the government's portion for the year—a loan of sorts.

Consider a $100,000 foreign portfolio value at the start of the year, a 39 percent tax rate and a risk-free rate of 10 percent. The government should have an ex post claim to the tax on $10,000 of income ($3,900 in tax), or loan the taxpayer $3,545 ex ante.[144] Instead, in the current regime, the government only deems $5,000 of income ex post ($1,950 in tax) or loans the taxpayer $1,773 ex ante.[145]

Conversely, consider the same figures but with the risk-free rate at 2.5 percent. The government should have an ex post claim to the tax on $2,500 of income ($975 in tax), or loan the taxpayer $951 ex ante.[146] However, the government deems the excessive fixed-rate baseline of $5,000 of income ex post ($1,950 in tax) or loans the taxpayer $1,902 ex ante.[147]

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[143] Supra Section III.A.1.

[144] The tax on the ex post deemed income discounted by the risk-free rate: $\frac{3{,}900}{1 + 0.10}$

[145] $\frac{1{,}950}{1 + 0.10}$

[146] $\frac{975}{1 + 0.025}$

[147] $\frac{1{,}950}{1 + 0.025}$

Recall that in either of these scenarios, if the government were to deem income at the risk-free rate, the taxpayer could rebalance his portfolio into risk-free assets to neutralize the loan, or to achieve equivalence with an ex post income tax system with full loss offsets.[148] Instead, with the current system, the government forgoes revenue in high interest rate environments and overtaxes taxpayers in low interest rate environments.

Savvy taxpayers may attempt to arbitrage the difference between the risk-free rate and the fixed five percent tax rate. When risk-free rates are above five percent, a taxpayer could borrow at (or close to) the risk-free rate domestically for the purpose of investing offshore and deduct the interest. Then, the taxpayer could invest those loan proceeds in a foreign fund that introduces a minimal amount of risk and pays close to the risk-free rate. The foreign investment would return a near-guaranteed return of more than five percent, but the government would only tax the return at five percent.

New Zealand's tax system provides two defenses against this. Firstly, the FIF regime forces taxpayers to use the CV method to calculate income on so-called non-ordinary shares thus taxing them on an accrual basis.[149] The definition of non-ordinary shares covers a wide range of interests that offer a return more akin to debt than equity.[150] It also cross references the Tax Administration Act 1994 s 91AAO, granting the Commissioner broad discretion to allow or disallow use of the FDR method.[151] Given New Zealand's existing financial arrangement rules and its policy to tax debt investments in full,

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[148] Supra Section III.A.2.

[149] ITA 2007, s EX 47(a) requires the CV method for non-ordinary shares.

[150] ITA 2007, s EX 46(10).

[151] Tax Administration Act 1994 (NZ), s 91AAO(1)(b) states "the Commissioner *may* determine that a type of financial arrangement … is [one for which] a person may not use the fair dividend rate method…" (emphasis added). Furthermore, the Commissioner's discretion is guided, but not constrained, by a non-exhaustive list of criteria, once again using the word "may". Subsection 91AAO(2) states "In making a determination, the Commissioner *may* take into account the following…" (emphasis added).

the Commissioner would likely view arrangements to arbitrage the five percent fixed rate with suspicion.[152]

Secondly, New Zealand is famously home to the oldest general anti-avoidance rule in the world, which, in the words of Craig Elliffe, "has been honed to a very sharp edge by the New Zealand Supreme Court."[153] However, given the Commissioner's abovementioned wide latitude to disallow the usage of the FDR method, it is hard to envisage a need for him to wield the general anti-avoidance rule to void such an arrangement.

Despite the specific and general anti-avoidance provisions, wily taxpayers could invest in offshore entities that introduce just enough risk to satisfy the Commissioner that the investments constitute equity rather than debt. Inland Revenue has issued dozens of determinations since 2007 about whether an interest in an offshore entity is entitled to the fair dividend rate method treatment.[154] Determinations allowing taxpayers to apply the FDR method often use language similar to the following:[155]

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[152] See ITA 2007, sub-pt EW and in particular s EW 3; New Zealand Inland Revenue Department, "Tax Information Bulletin: Volume 19, Issue 3," 42. For a thorough commentary on non-ordinary shares and the Commissioner's discretion see Elliffe, *International and Cross-Border Taxation in New Zealand*, 312, at [14.9.2].

[153] Craig Elliffe, "Policy Forum: New Zealand's General Anti-Avoidance Rule-A Triumph of Flexibility over Certainty," *Canadian Tax Journal* 62, no. 1 (2014): 147–64.

[154] New Zealand Inland Revenue Department, "Foreign Investment Fund Determinations," accessed April 9, 2024, https://www.taxtechnical.ird.govt.nz/publications#sort=%40irscttissuedatetime%20descending&numberOfResults=100&f:@irscttpublicationtypes=[Determinations,International%20tax,Foreign%20investment%20funds], archived at https://perma.cc/DD74-J388.

[155] See, for example, New Zealand Inland Revenue Department, "Determination FDR 2023/01," January 25, 2023, https://www.taxtechnical.ird.govt.nz/determinations/international-tax/foreign-investment-funds/2023/fdr-2023-01, archived at https://perma.cc/JL8U-B7QK. The Commissioner determined that taxpayers could use the FDR method despite the fact the entity "invests in long and short positions in equity, bond, currency and commodity markets, [and exposure] to these markets is primarily achieved through the use of exchange traded futures or over the counter derivatives such as currency forward contracts."

> Notwithstanding that the [relevant entity] may have assets predominantly comprising financial arrangements and New Zealand resident investors may enter into related New Zealand dollar hedging arrangements, the overall arrangement contains sufficient risk so that it is not akin to a New Zealand dollar-denominated debt instrument. Accordingly, I consider it is appropriate for New Zealand resident investors to use the fair dividend rate method to calculate FIF income from their attributing interest in the [entity].

Past determinations prove that entities trading in derivative instruments linked to underlying debt and equity securities are not precluded from applying the FDR method. Tax planners can analyze historical determinations to understand the necessary risk threshold to cross to trigger FDR method applicability.[156] Given this, the opportunity to arbitrage the fixed five percent of the FDR method exists (albeit not risk free, thus not pure arbitrage).

3. The tax advantage of 23-month holdings

The fair dividend rate method does not levy tax at all in the year of acquisition of an asset,[157] but does levy tax in the year of disposal, despite the length of holding in either year. This presents an opportunity for taxpayers to plan their sales and purchases to have a guaranteed zero tax burden every alternate year.[158] Combined with the ability to elect the comparative value method in years in which a taxpayer's portfolio generates a total return

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[156] For example, the Commissioner determined that the "iShares Green Bond Index Fund – NZD Share Class" crossed the line into debt. New Zealand Inland Revenue Department, "Determination FDR 2022/02," October 14, 2022, https://www.taxtechnical.ird.govt.nz/determinations/international-tax/foreign-investment-funds/2022/fdr-2022-02, archived at https://perma.cc/SH9L-MTJM.

[157] Supra note 31.

[158] The media reported on this strategy days prior to the rules coming into force. A New Zealand Herald article referred to the practice of selling before the end of the tax year and repurchasing after the next tax year starts as "bed and breakfasting." Diana Clement, "Rush to Sell Shares before Tax D-Day," NZ Herald, March 29, 2007, https://www.nzherald.co.nz/business/rush-to-sell-shares-before-tax-d-day/ZBZ6JT7ZTBNZNSBRHPMFDIPLRU/, archived at https://perma.cc/3AJH-M5V7. Smith and Dunbar, "Taxation of Offshore Portfolio Investment by New Zealand Residents," 254–55.

less than five percent, a taxpayer could, with the luck of the market, string together multiple years of no tax burden.

4. Distortions arising from double taxation

A complete analysis of the double taxation issues present in the FIF rules is beyond the scope of this paper. However, I briefly raise the issues below to highlight their likely distortive effects.

In New Zealand, taxpayers only ever pay their maximum personal tax rate on income due to the integration between personal and corporate tax rules. Domestic companies attach imputation credits to dividends based on company tax paid. Taxpayers credit that against the tax they owe on other personal income.[159]

When New Zealand tax residents invest in foreign companies, the government does not afford them such a privilege. Due to the separate legal personhood of the offshore entity, New Zealand taxpayers are unable to claim credit for the foreign tax the corporation pays. Contrast this to tax on dividends withheld by the foreign source country which the New Zealand government credits against domestic tax.[160]

Prior to 2018, the corporate tax rate in the United States was 35 percent.[161] During that time, New Zealand taxpayers in the highest tax bracket were paying between 33 and 39 percent on deemed income. [162] For taxpayers with exposure to corporations resident in the United States, those underlying corporations had already paid the corporate rate of 35 percent tax on earnings. This likely resulted in punitively high integrated tax rates for New

[159] ITA 2007, s LE 1.
[160] ITA 2007, sub-pt LJ.
[161] 26 USC 11(b) prior to 2018.
[162] For historical tax rates across jurisdictions, see Ranjana Gupta, "The Case for Tax in Democracies," *Australian Tax Forum* 35, no. 1 (2020): 23–26, at [Table 1]-[Table 3].

Zealand individuals. This double taxation not only exacerbates the after-tax bias towards investing in New Zealand companies, it also likely distorts offshore investment in favor of companies resident in lower tax jurisdictions.

I do not explicitly argue for a solution to this double taxation issue in this paper. Policymakers should independently analyze and evaluate these distortive effects in any review of the FIF rules.

IV. STRUCTURAL REFORM

A. Introducing a retrospective realization method

Alan Auerbach concisely outlined the distortions a typical realization-based capital gains taxation system introduces in his work on retrospective capital gains taxation. A typical system presents two problems. Firstly, it locks taxpayers into holding specific assets even if, absent the tax upon realization, different assets produce better returns. Secondly, because realization of an asset itself is generally voluntary, realization systems encourage taxpayers to hold winners and sell losers. That way, taxpayers accelerate losses (deductions) to the present and defer gains (and the tax thereon) to the distant or indefinite future. Pure accrual taxation contains neither of these flaws. Auerbach proceeded to propose a model equivalent to accrual taxation that accounts for the time value of money but only levies the tax upon realization of an asset.[163] Auerbach and David Bradford's later discrete formulation of the retrospective realization system happens to be equivalent to the iteration of a formula developed by Louis Kaplow in the early 1990s.[164]

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[163] Alan Auerbach, "Retrospective Capital Gains Taxation," *The American Economic Review* 81, no. 1 (March 1991): 167–68, https://doi.org/10.3386/w2792.

[164] I use this discrete formulation below in this section. Auerbach and Bradford, "Generalized Cash-Flow Taxation," 960 at [Equation 4].

In 1994, Kaplow published an article that extended Domar and Musgrave's work on risk-taking and allocation.[165] In his model, Kaplow proves that an ex ante wealth tax is equivalent to an ex post income tax for both the taxpayer (if willing to rebalance into risk-free assets) and the government (if willing and able to rebalance into the same risky assets as the taxpayer).[166]

The theoretical underpinning of New Zealand's FDR and cost methods is essentially a year-after-year iteration of Kaplow's ex ante wealth tax, which is equivalent to an ex post economic income tax on accrual. The reason New Zealand's system is equivalent, but not identical, to a direct iteration of Kaplow's ex ante wealth tax is because New Zealand requires the tax to be paid at the end of each period, not at the beginning. Requiring tax to be paid at the beginning of the period would be a purer implementation of Kaplow's ex ante wealth tax. This difference results in the government forcing a one-year loan on taxpayers. Such a loan results in a lower effective tax rate when the risk-free rate is higher than five percent but a higher effective tax rate when the risk-free rate is lower than five percent.[167] This consequence ultimately results from the fixed nature of the fair dividend rate. If the fair dividend rate was instead equal to the one-year New Zealand government bond yield as at the start of each tax year, that would solve this issue and transform the FDR method into its originally intended risk-free rate method.[168]

Consider the following pure ex ante implementation of New Zealand's current FDR method across two years.[169] Assume a New Zealand taxpayer's total offshore FIF interests

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[165] Kaplow, "Taxation and Risk Taking"; Domar and Musgrave, "Proportional Income Taxation and Risk-Taking."
[166] Kaplow, "Taxation and Risk Taking," 790–93.
[167] Supra Section III.C.2.
[168] Supra note 74 and Sections II.C.1 and III.C.2.
[169] That is, levying *and* collecting the tax at the start of each period.

amount to $100,000 at period zero (that is, immediately prior to 1 April of a given year). Assume the risky return on that portfolio happens to be 10 percent in each period. We need not know the risky return ex ante (that is, at the start of each tax year), but our assumption of a 10 percent return on investment each year illustrates the ex post accrual tax equivalence. Staying true to the currently implemented FIF regime, we assume the risk-free rate is five percent. In reality, this is the fair dividend rate, or the deemed income rate, which stands in as a proxy for the risk-free rate. Assume the top marginal tax rate of 39 percent.

Annual ex ante system				
Applying Kaplow (1994)				
Period	**Asset value before tax**	**Asset value after tax**	**Tax rate**	**Tax due**
0	$100,000	$98,143	1.857%	$1,857
1	$107,957	$105,952	1.857%	$2,005
2	$116,547		1.857%	$2,164

This is simply Kaplow's one-period ex ante wealth tax applied twice. The ex ante wealth tax calculation is $\frac{tr}{1+r}$ where t is the tax rate and r is the risk-free rate or fair dividend rate such that $\frac{0.39 \times 0.05}{1+0.05} = 1.857\%$. Dividing by $1 + r$ discounts the risk-free return to the start of the period. Just as we saw in Section III, if taxpayers rebalance a portion of their portfolio into risk-free assets, they will be in a position such that the government shares equally in the upside and downside of the risk (to the percentage of the tax rate) as if simulating an ex post income tax with full loss offsets. However, the point here is not to rehash Kaplow's result. This is simply our base case to intuitively understand how Auerbach's retrospective tax would dovetail into New Zealand's current regime.

To intuitively understand Auerbach's retrospective tax on capital, consider our two-period model above with the same parameters, but assume tax is not levied until the asset is realized.

Potential equivalent realization tax			
Applying Auerbach and Bradford (2004)			
Asset value (no tax)	**Remaining wealth after realization tax**	**Wealth tax if realized**	**Asset value after wealth tax**
$100,000	100.0000%	0.0000%	$100,000
$110,000	98.1429%	1.8571%	$107,957
$121,000	96.3202%	3.6798%	$116,547

Our risky asset grows to $110,000 after one period and $121,000 after two periods. If the taxpayer converts the entire asset into cash at the end of period two (or to analogize to the FIF rules, any time during period two),[170] then the entire interest realized (in this case $121,000) would be subject to the wealth tax, irrespective of the price paid for that asset.[171]

Contrast this with a typical ex post system in which only the difference between the cost basis ($100,000) and the realized value ($121,000) would be taxable: the $21,000 profit. Instead, under the retrospective tax, the tax of 3.6798 percent applies to the entire realized amount resulting in a tax bill of $4,453.[172] Note that, while the taxpayer owed no tax while he held the asset (and its growth compounded) through periods one and two, the

[170] Supra Section III.C.3.

[171] The tax on the realized amount would be $[1 - \left(\frac{1+r(1-t)}{1+r}\right)^{p}]$, where r is the FDR (or the risk-free rate), t is the tax rate and p is the number of periods. In this example our values are r = 0.05, t = 0.39 and p = 2.

[172] The government could apply the same logic from Kaplow's 1994 model to rebalance its portfolio ex ante by issuing debt and investing the proceeds in risky assets. The government's eventual ex post tax claim on the realized asset, together with its risky returns, would be equivalent to an ex post income tax. This, however, assumes the government has access to the same risky investments as taxpayers. See Kaplow, "Taxation and Risk Taking," 792.

after tax result at the end of period two is identical to the iterated ex ante Kaplow result after period two.

Now, I demonstrate the New Zealand system's equivalence to Kaplow's system. On the first day of the tax year, New Zealand taxpayers can calculate the precise amount of tax due under the FDR method at the end of the year.[173] By holding assets subject to the FDR method, taxpayers are implicitly accepting a loan from the New Zealand government. The principal of that loan is whatever amount will grow into five percent of the current value of the assets subject to the FDR method in one year.[174]

Current NZ system							
Period	**Asset value before tax**	**Asset value after tax**	**Implicit government loan**	**Interest on implicit loan**	**Deemed income**	**Tax rate**	**Tax due**
0		$100,000	$1,857				
1	$110,000	$108,050	$2,007	$1,950	$5,000	39%	$1,950
2	$118,855	$116,748		$2,107	$5,403	39%	$2,107

Consider the same two period model as above but under New Zealand's current system. Unlike Kaplow's pure ex ante wealth tax, the New Zealand system waits until the end of the period to levy the tax. Despite this, the tax due at the end of the period is calculable ex ante since the law imposes it even if taxpayers dispose of the asset during the year.[175] Given our starting $100,000, we know that $1,950 of that will be levied in one year's time. This is akin to a $1,857 loan from the government given the time value of money.[176]

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[173] Remember, however, under the current regime, taxpayers may opt to apply the CV method if total FDR method portfolio return is less than five percent.

[174] $\frac{ytd}{1+r}$ where y is the market value of assets, t is the tax rate, d is the deemed income rate and r is the risk-free rate. In the table I assume the risk-free rate is five percent for simplicity's sake.

[175] This disregards the CV method optionality which is unknowable ex ante.

[176] Assuming a five percent risk-free rate.

The $1,857 principal is a liability not an asset to the taxpayer. This means that, without rebalancing, our taxpayer is leveraging the government's balance sheet to invest in risky assets. The taxpayer could neutralize this implicit loan by rebalancing the principal into a risk-free asset. After one year, that risk-free asset will have grown such that the principal and interest will pay the tax owed on the risky asset under the FDR method as well as the tax on the interest. Note that, by neutralizing the implicit loan, we simulate Kaplow's ex ante system. (Conversely, one could simulate New Zealand's system from Kaplow's by borrowing the ex ante tax due and investing that in risky assets.)

This shows that, by applying Auerbach's retrospective realization formula, we can achieve a result equivalent to the FDR method without the government loan component.

B. Progressive rates under a retrospective system

1. Fixing the retrospective tax rate at the top personal rate

One problem with the retrospective realization system is that by its nature it is indifferent to the fluctuations of assets across multiple periods. The FDR and cost methods deem income annually. Each year, a taxpayer's marginal tax rates may fluctuate as his overall income fluctuates. In a year of low overall income, FIF assets may deem a moderate income that does not push the taxpayer into a higher bracket. Conversely, in a year of low

domestic income, it is possible, although unlikely, for a taxpayer's offshore portfolio income (deemed or otherwise) to push him into the top bracket.[177]

While New Zealand taxes income on a progressive rate schedule, its highest marginal rate kicks in at a lower threshold than comparable jurisdictions.[178] It is not a stretch to posit that the types of taxpayers who hold illiquid offshore assets are those who are (or should be) in the top marginal income tax bracket. Given this, it may be fair to fix the tax rate under the retrospective realization method at the top marginal rate. Policymakers should undertake empirical research to understand the distribution of the marginal rates cost method filers to determine whether fixing the rate at the top marginal rate would be equitable.

If serious equity concerns arise, policymakers could employ several mechanisms ranging from blunt to precise (and hence simple to complex) to solve the inequity. On the blunt end of the spectrum exist two potentially distortionary options. Firstly, a retrospective realization method could take into consideration taxpayers' tax brackets over the holding period of the asset. Secondly, such a method could fix a rate lower than the FDR equivalent in the top bracket. On the precise end of the spectrum, policymakers could devise a new system of long-term taxable income and rates that lives parallel to, or intersected with, the existing system of annual taxable income.

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[177] To put into context why this is unlikely, consider a taxpayer in the thirty percent bracket with exactly $70,000 of domestic income. That taxpayer must earn over $110,000 more from FIF income to hit the top tax rate of 39 percent at $180,000. $110,000 of FIF income under the FDR method suggests an offshore portfolio worth $2,200,000. Considering in 2021, owner-occupied dwellings and other real estate accounted for 43 percent of total household assets and financial assets made up a fraction of that, it is unlikely for taxpayers to move up multiple tax brackets on account of FIF income. That is, people with significant FIF income are likely already in the highest tax bracket. Stats NZ Tatauranga Aotearoa, "Household Net Worth Statistics: Year Ended June 2021," March 3, 2022, https://www.stats.govt.nz/information-releases/household-net-worth-statistics-year-ended-june-2021/, archived at https://perma.cc/C8FD-7QDW.
[178] Gupta, "The Case for Tax in Democracies," 23–26.

2. Retrospective marginal rates

Consider a taxpayer who, across three periods, files at the 33 percent marginal rate for period one, the 30 percent rate for period two, and the 39 percent rate for period three. If the taxpayer had acquired the asset prior to period one and disposes of it during period three, then the retrospective realization method would apply across three periods. Instead of raising the formula to the third power, we would iterate the subtrahend, replacing *t* for the taxpayer's marginal rate at that period. That is,

$$\left[1-\left(\frac{1+r(1-t)}{1+r}\right)^{p}\right]$$

would become:[179]

$$\left[1-\left(\frac{1+r\left(1-T_{p1}\right)}{1+r}\right)\left(\frac{1+r\left(1-T_{p2}\right)}{1+r}\right)\left(\frac{1+r\left(1-T_{p3}\right)}{1+r}\right)\right]$$

In our specific case, instead of the tax rate for the taxpayer who is in the 39 percent rate for three years being calculated by the following formula,

$$\left[1-\left(\frac{1+0.05(1-0.39)}{1+0.05}\right)^{3}\right]=\ 5.47\%$$

the formula for varying tax brackets would be:

$$\left[1-\left(\frac{1+0.05(1-0.33)}{1+0.05}\right)\left(\frac{1+0.05(1-0.30)}{1+0.05}\right)\left(\frac{1+0.05(1-0.39)}{1+0.05}\right)\right]\ =\ 4.78\%$$

The major downfall of this methodology is that it is extremely sensitive and prone to tax planning. This would incentivize taxpayers to bunch income so that a majority of periods are in as low a bracket as possible over the holding period of an illiquid asset.

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[179] If the RFRM were to replace the FDR method, then we would need to iterate this formula in this fashion in any case. In this specific case, it would become:

$$\left[1-\left(\frac{1+R_{p1}\left(1-T_{p1}\right)}{1+R_{p1}}\right)\left(\frac{1+R_{p2}\left(1-T_{p2}\right)}{1+R_{p2}}\right)\left(\frac{1+R_{p3}\left(1-T_{p3}\right)}{1+R_{p3}}\right)\right]$$

The other problem with this methodology is that the retrospective realization method is indifferent to when the underlying asset gained or lost value.[180] That indifference forms a large part of its value. This attribute allows us to consider the value of the asset only upon realization and not any time ex ante, including the asset's original cost. The consequence of this double-edged sword is that it is possible for the asset to experience exponential value growth in period one and then in period two crash back to lower than its acquisition value. Unlike the FDR method, the retrospective realization method cannot (nor do we want it to) introspect on the value of the asset while it is unrealized. Given this, assigning progressively higher or lower rates to certain periods could lead to results that are totally inconsistent with an accrual-based economic income tax or its equivalent (like Kaplow's ex ante wealth tax or the FDR method).

Given these limitations and the potential market distortions, I suggest that considering taxpayers' brackets for retrospective periods is too blunt an instrument to consider seriously.

3. Preferential fixed rate

Rather than deeming a five percent return per year and taxing that at 39 percent, the retrospective realization method could either deem income at a lower annual rate or tax at a lower rate. Determining the correct disjunct is somewhat moot since mathematically they have the same effect: deeming two-and-a-half percent income at a 39 percent tax rate is identical to deeming five percent income at a 19.5 percent tax rate. However, given political whims and frequently changing top income tax rates, it may be optically shrewd to peg the

[180] Auerbach, "Retrospective Capital Gains Taxation," 168, citing Green and Sheshinski; Jerry R. Green and Eytan Sheshinski, "Optimal Capital-Gains Taxation under Limited Information: Journal of Political Economy," *Journal of Political Economy* 86, no. 6 (December 1978): 1143, https://doi.org/10.1086/260732.

tax rate to the top rate and modify the deemed income rate. This rhetorical choice also has touches of fairness if the FDR method retains its electable cousin, the CV method. As I demonstrated in Section III.C.1, taxpayers' ability to elect the CV method in years of economic return prices the deemed income at around half of the stated five percent fair dividend rate.[181]

Given this, it makes sense to lower the deemed rate on the retrospective realization method to align with the FDR/CV combination. If Parliament repeals the electability of the CV method, then the argument for preferential treatment of the retrospective realization tax rate lessens but does not fully abate (assuming progressive rates remain).

4. Retrospective marginal headroom credit

To get closer to the (purported) vertical equity that progressive rates provide, policymakers could concoct a separate tax rate system that operates over a longer period of time. For example, one could conceive of a system in which, upon realization, a taxpayer looks back to the periods over which he held the asset and determines how much income headroom (if any) he had between his tax bracket that period and the next bracket (and so on to the top bracket). The taxpayer (and/or Inland Revenue) could keep a tally of how much of that headroom the taxpayer accrues or spends each year. A taxpayer who has been declaring taxable income in the top bracket for the entire holding period will have no

[181] Yet another, perhaps more intuitive, way to think about this is to consider the historical performance of the global stock market. Vanguard's Total World Stock ETF, listed on NYSE Arca under the ticker "VT" tracks the global stock market including well-established and emerging markets. In the fund's 16 years since inception in 2008 its capital value has gained over the trailing 12 months to 31 March 11 times. That is, on average, the global market has been down approximately one in four years. A New Zealand taxpayer holding a globally diverse portfolio would have had no tax liability in those years of loss. "VT-Vanguard Total World Stock ETF | Vanguard," accessed April 11, 2024, https://investor.vanguard.com/investment-products/etfs/profile/vt.

headroom and we can revert to the exponentiated equation.[182] However, for a taxpayer who was in the 33 percent bracket and had $50,000 headroom until hitting the top bracket, the government should arguably allow a tax credit of $3,000[183] if the retrospective realization method always uses the top rate of 39 percent.[184] The concept of progressive rate headroom is similar to that of loss carryforwards and could borrow from that realm of policymaking.

This introduces significant complexity into the system. For that reason alone, policymakers should be cautious in considering it.

5. Lifetime allowance

A simpler version of allowing taxpayers to carry forward their progressive headroom is to simply give them a lifetime allowance of preferential treatment on the retrospective realization method. In a similar fashion to the way the United States grants its taxpayers a $13,610,000 lifetime gift tax exemption,[185] New Zealand could grant its taxpayers some value, say, five million dollars, of lifetime preferential treatment under the retrospective realization method. If policymakers were to seriously consider this methodology, they should determine the specific amounts for the lifetime allowance and the preferential rate given empirical research into, for example, how much progressive tax rate headroom taxpayers typically give up over their lifetimes.

6. Rates reform

I reiterate that it is unclear whether fixing the retrospective realization tax rate at the top income tax rate is inequitable given the types of people likely holding illiquid

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[182] $\left[1-\left(\frac{1+r(1-t)}{1+r}\right)^{p}\right]$. Supra Section IV.B.2.
[183] $[50{,}000 \times 0.39 - 50{,}000 \times 0.33 = 3{,}000]$
[184] I propose ringfencing this credit exclusively to the retrospective realization method.
[185] 26 USC §§ 2010 and 2505; Rev Proc 2023-34 § 3.41, 2023-48 IRB 1287.

foreign equities. That being said, a simpler way to fix the tax rate progressivity issue would be to compress New Zealand's rates into a flatter structure. New Zealand could have a simpler, broader base and fairer system[186] if policymakers lowered and compressed the top rates (with company and trust rates aligned) to be competitive with other jurisdictions' long term capital gains rates. The loss of government revenue from reducing the top rates could be fiscally and equitably neutral through three mechanisms: firstly, extending the FDR method and retrospective realization method to domestic assets, hence broadening the tax base to its "final frontier" of domestic capital gains; secondly, increasing the rate on New Zealand's national goods and services tax ("GST") from the current 15 percent rate; thirdly, assuming the first two mechanisms result in a net revenue surplus, redistributing the surplus to eliminate the regressivity of the additional consumption tax on low earners.

In considering rates reforms of this kind, policymakers should research the higher-order economic effects of changing tax rates and shifting more of the progressivity burden to the transfer and welfare system.

C. Administrability

1. Counterarguments to administration concerns

Critics might argue that this system is significantly more burdensome to administer than the cost method. In particular, if a taxpayer increases or decreases their shareholding in an asset at varying times, the taxpayer will have to keep track of acquisitions and dispositions.[187] I argue this is no harder than most jurisdictions' requirements for taxpayers

[186] Policy would need to shift vertical equity from the tax system to the transfer system to achieve fairness. Given New Zealand already has a fairly robust transfer and welfare system, this should be a more straightforward endeavor than in some jurisdictions.

[187] Under the cost method, taxpayers still must track shareholding acquisitions and dispositions each period, *including the price paid*, per ITA 2007, ss EX 56(4)- EX 56(6).

to keep track of their shareholdings in tax lots for the purposes of ex post capital gains tax. In fact, the retrospective realization method is simpler since taxpayers need not track the cost basis of assets but merely the number of shares purchased and the time of purchase. Upon disposal, just like in ex post capital gains tax systems, taxpayers should have the right to choose the specific lots of which they are disposing. Under the retrospective realization method, the only data required is the gross amount realized, the holding period (which could differ by lot), the tax rate and the risk-free rate (or the deemed income rate).

Furthermore, from a taxpayer administration and efficiency perspective, the retrospective realization system eliminates the need for independent valuation upon entry into the method.

2. Deemed realization upon loss of residency and liquidity events

To prevent avoidance through emigration, Parliament would need to enact exit provisions concurrently with a new retrospective realization method. The simplest version of these would deem complete realization of all assets subject to the method at the time the taxpayer loses residency. This would give rise to an exit tax based on how long the emigrating taxpayer held each asset (or lot) and its value at the time the taxpayer loses residency. Given the nature of the assets eligible for the method (assuming the same test as the cost method), this would likely require independent valuation of said assets on loss of residency.

To be consistent with the current rules, specifically the dynamics between the cost method and the FDR method, if an asset subject to the retrospective realization method becomes liquid and easy to value, then the rules should require taxpayers to switch to the

FDR method. For administrability purposes, this should trigger a deemed realization of the entire newly liquid asset so that it can join the taxpayer's ex ante FDR method portfolio.

3. Transitional arrangements

The beauty of the retrospective realization method is its equivalence to the FDR method. This equivalence is something that the cost method attempted to approximate but could never match due to real-world valuation limitations. The widespread transition from the cost method to the retrospective realization method is simple. For the year in which Parliament repeals the cost method and replaces it with the retrospective realization method, all taxpayers who own assets already in the cost method would file for that year using the cost method. On the first day of the following tax year the new legislation would deem all assets in the cost method the prior year as now categorized under the retrospective realization method. Those assets' holding periods would start ticking under the retrospective realization method as of the start of that tax year. Taxpayers would no longer owe tax at the end of the year under the cost method unless they realized some or all of an asset under the method.

While there would be minimal burden transitioning to the retrospective realization method, it is worth pointing out that a system-wide transition away from the retrospective realization method, say, back to the cost method, would be significantly harder. All the assets under the retrospective realization method would either need to run their course until a deemed or actual realization, or the transition would require valuations and deemed realizations upon transition. However, this latter approach would land us right back in the mess we are in now: a tax bill without the cash to pay it.

D. Additional reforms

1. Replacing the cost method

As I argued in Section III.B., the actual value of assets can significantly outpace the deemed value under the cost method. Five years can be a long time in markets. In that time, highly risky assets can diverge greatly from their original valuation. The further the actual value of the asset grows above the deemed value the stronger the lock-in effect grows.

On the other side of the coin, if an asset's actual value drastically decreases soon after an independent valuation, the taxpayer could be significantly overpaying taxes on his economic income from that asset. If the asset does not recover to an actual price at or above the deemed value, then the taxpayer is stuck being overtaxed for up to five years. Just like the FDR/CV election option, volatility exacerbates the risk of a windfall to either the taxpayer or the government under the cost method.[188]

The retrospective realization method overcomes these cost method flaws. Additionally, the retrospective realization method solves the liquidity problem by allowing taxpayers to pay the tax from the proceeds of a realization event. While it would be possible for the retrospective realization method to live alongside the cost method, it makes more sense to replace the cost method wholesale with the retrospective realization method. Replacing the cost method with the retrospective realization method removes taxpayers' ability to game the cost method with hard-to-value but sellable investments.

Had Hamuera been subject to the retrospective realization method instead of the cost method, he would have stayed in New Zealand and become a full tax resident.

[188] See supra Sections III.B and III.C.1.

2. Removing the comparative value election

As I argued in Section III.C.1., the ability to elect the comparative value in loss years distorts the market and incentivizes more volatile foreign portfolios. Furthermore, pricing the ex ante value of the optionality to the government results in roughly half the deemed income under the FDR, assuming the average volatility of global markets. The government's ex ante claim reduces as taxpayers' portfolio volatilities increase. Given that most taxpayers can rebalance their portfolios to reduce the incidence of tax in years of economic loss, Parliament should simply remove the ability to elect the comparative value.

New Zealand's 2018 Tax Working Group agreed with this position in its final report:[189]

> [The FDR/CV election] concession is anomalous and inconsistent with the idea behind taxing a risk-free return. It also potentially creates a bias in favour of non-Australasian shares because taxpayers are subject to a maximum 5% rate of return but can elect the actual rate of return if it is lower. … If the FDR rate is ultimately lowered from 5%, the Group recommends removing the ability to choose to apply the CV option only in years where shares have returned less than 5%.

The group's reference to lowering the fair dividend rate stemmed from a prior recommendation to adjust the rate more frequently in line with risk-free rates.[190]

3. Setting the fair dividend rate at the risk-free rate

While the 2018 Tax Working Group did not state it explicitly, Parliament should peg the fair dividend rate to the one-year risk-free rate each year. The FDR method would

[189] Tax Working Group 2018, "Future of Tax - Final Report Volume II: Design Details of the Proposed Extension of Capital Gains Taxation," February 21, 2019, 57 at [8.15].
[190] Tax Working Group 2018, 56 at [8.11].

thus become its originally intended RFRM. Resetting the rate at which the FIF regime deems income each year to the risk-free rate would prevent the arbitrage opportunities I outlined in Section III.C.2.

If the regime deems income based on the one-year government bond rate, then taxpayers can use the rebalancing mechanisms I outlined in Section III.A.2. to perfectly emulate an ex post income tax system with full loss offsets. This also means that the implicit loan from the government to taxpayers is set at a fair rate such that taxpayers can neutralize it if they choose.[191] This removes the chance of the government undertaxing or overtaxing foreign portfolios based on divergence between the risk-free rate and the fixed fair dividend rate.

Adopting the risk-free rate in place of the fair dividend rate would raise questions as to whether the periodic fair dividend rate should also move to a floating risk-free rate method. While arguments for and against such a move are beyond the scope of this paper, it would be more complex, but certainly possible, to use floating market-based risk-free rates in conjunction with a more-frequently-than-annually periodic calculation like the periodic fair dividend allows.[192]

V. CONCLUSION

Ideally, Parliament removes taxpayers' ability to choose the comparative value method, floats the fair dividend rate, and replaces the cost method with the retrospective realization method. However, if the first two items of this proposal are politically or

[191] Supra Section IV.A.
[192] Simply reusing the existing legislation and replacing the fair dividend rate with the one-year bond yield would potentially be open to tax arbitrage when short term rates deviate from the annual rate determined ex ante.

otherwise infeasible, then Parliament should still implement a retrospective realization method. Retaining the FDR at a fixed five percent rate simplifies the administration of the retrospective realization method, particularly if the tax rate stays constant. Given a fixed interest rate[193] and tax rate, one can simply raise the formula to the number of periods the taxpayer held the investment.

Completely replacing the cost method with the retrospective realization method makes more sense than including both. Keeping the cost method runs the real risk that the government either undertaxes or overtaxes taxpayers given the diverging nature of deemed and actual values. However, again, if for political or other reasons, the cost method must be kept, it would be possible to move between the cost method and the realization method. As discussed in Section IV.C.3, transitioning from the cost method to the retrospective realization method is simple. The inverse requires an independent valuation and a deemed realization event.

Ultimately, the ideal and simplest regime would consist of only two methods: the RFRM and the retrospective realization method.

[193] I use "interest rate" here generically and without modifier both because Auerbach uses "risk-free interest rate" or "safe rate of interest" in his original formulations and because the formula could just as easily use the fair dividend rate in place of a risk-free interest rate tied to the market.

VI. APPENDIX A: How volatility affects effective tax rates

SPHB 2014-2024				FDR/CV election									
Tax year	Closing date	Price	Divs	Shares held	Value	Div val	FDR income	FDR tax	CV income	CV tax	Income	Tax	Method
2014	March 31, 2014	$31.12		3,213.37	$100,000								
2015	March 31, 2015	$34.30	$0.27	3,213.37	$110,219	$607	$5,000	$1,950	$10,219	$3,985	$5,000	$1,950	FDR
2016	March 31, 2016	$28.79	$0.48	3,156.52	$90,876	$1,061	$5,511	$2,149	$0	$0	$0	$0	CV
2017	March 31, 2017	$37.59	$0.36	3,156.52	$118,653	$795	$4,544	$1,772	$28,838	$11,247	$4,544	$1,772	FDR
2018	March 29, 2018	$42.50	$0.64	3,109.37	$132,148	$1,393	$5,933	$2,314	$14,290	$5,573	$5,933	$2,314	FDR
2019	March 29, 2019	$41.57	$0.63	3,054.93	$126,994	$1,347	$6,607	$2,577	$0	$0	$0	$0	CV
2020	March 31, 2020	$29.21	$1.00	3,054.93	$89,235	$2,138	$6,350	$2,476	$0	$0	$0	$0	CV
2021	March 31, 2021	$69.53	$0.57	3,054.93	$212,409	$1,219	$4,462	$1,740	$125,313	$48,872	$4,462	$1,740	FDR
2022	March 31, 2022	$75.96	$0.55	3,029.91	$230,152	$1,167	$10,620	$4,142	$18,961	$7,395	$10,620	$4,142	FDR
2023	March 31, 2023	$69.96	$0.40	2,975.38	$208,157	$833	$11,508	$4,488	$0	$0	$0	$0	CV
2024	March 28, 2024	$87.74	$0.75	2,975.38	$261,060	$1,562	$10,408	$4,059	$53,735	$20,957	$10,408	$4,059	FDR
				Net return	$173,182						CV election frequency		40%
				Total tax	$15,977								
				ETR	8.45%								
Closing price data: https://finance.yahoo.com/quote/SPHB/history?filter=history&period1=1396224000&period2=1711843200 (accessed April 12, 2024)													
Dividend data: https://finance.yahoo.com/quote/SPHB/history?filter=div&period1=1396224000&period2=1711843200 (accessed April 12, 2024)													

Table 1.1

SPLV 2014-2024				FDR/CV election									
Tax year	Closing date	Price	Divs	Shares held	Value	Div val	FDR income	FDR tax	CV income	CV tax	Income	Tax	Method
2014	March 31, 2014	$27.38		3,652.30	$100,000								
2015	March 31, 2015	$31.26	$0.88	3,652.30	$114,171	$2,250	$5,000	$1,950	$14,171	$5,527	$5,000	$1,950	FDR
2016	March 31, 2016	$34.00	$0.86	3,589.92	$122,057	$2,161	$5,709	$2,226	$10,136	$3,953	$5,709	$2,226	FDR
2017	March 31, 2017	$37.42	$0.88	3,524.44	$131,885	$2,171	$6,103	$2,380	$11,988	$4,675	$6,103	$2,380	FDR
2018	March 29, 2018	$41.30	$0.96	3,460.84	$142,932	$2,326	$6,594	$2,572	$13,219	$5,155	$6,594	$2,572	FDR
2019	March 29, 2019	$47.31	$1.07	3,398.57	$160,786	$2,546	$7,147	$2,787	$20,179	$7,870	$7,147	$2,787	FDR
2020	March 31, 2020	$43.16	$1.28	3,339.65	$144,139	$2,992	$8,039	$3,135	$0	$0	$0	$0	CV
2021	March 31, 2021	$54.59	$1.09	3,339.65	$182,312	$2,548	$7,207	$2,811	$41,165	$16,054	$7,207	$2,811	FDR
2022	March 31, 2022	$64.02	$1.03	3,288.16	$210,508	$2,371	$9,116	$3,555	$30,745	$11,990	$9,116	$3,555	FDR
2023	March 31, 2023	$60.87	$1.38	3,232.63	$196,770	$3,123	$10,525	$4,105	$0	$0	$0	$0	CV
2024	March 28, 2024	$65.87	$1.54	3,232.63	$212,934	$3,485	$9,839	$3,837	$19,286	$7,521	$9,839	$3,837	FDR
				Net return	$138,906						CV election frequency		20%
				Total tax	$22,118								
				ETR	13.74%								
Closing price data: https://finance.yahoo.com/quote/SPLV/history?filter=history&period1=1396224000&period2=1711843200 (accessed April 12, 2024)													
Dividend data: https://finance.yahoo.com/quote/SPLV/history?filter=div&period1=1396224000&period2=1711843200 (accessed April 12, 2024)													

Table 1.2

SPHB 2014-2024				FDR						CV					
Tax year	Closing date	Price	Divs	Shares held	Value	Div val	FDR income	Tax	Method	Shares held	Value	Div val	CV income	Tax	Method
2014	March 31, 2014	$31.12		3,213.37	$100,000					3,213.37	$100,000				
2015	March 31, 2015	$34.30	$0.27	3,156.52	$108,269	$597	$5,000	$1,950	FDR	3,097.18	$106,233	$585	$10,219	$3,985	CV
2016	March 31, 2016	$28.79	$0.48	3,083.18	$88,765	$1,036	$5,413	$2,111	FDR	3,097.18	$89,168	$1,041	$0	$0	CV
2017	March 31, 2017	$37.59	$0.36	3,037.14	$114,166	$765	$4,438	$1,731	FDR	2,803.61	$105,388	$707	$28,296	$11,035	CV
2018	March 29, 2018	$42.50	$0.64	2,984.75	$126,852	$1,337	$5,708	$2,226	FDR	2,670.80	$113,509	$1,197	$14,472	$5,644	CV
2019	March 29, 2019	$41.57	$0.63	2,925.25	$121,603	$1,290	$6,343	$2,474	FDR	2,670.80	$111,025	$1,178	$0	$0	CV
2020	March 31, 2020	$29.21	$1.00	2,844.07	$83,075	$1,991	$6,080	$2,371	FDR	2,670.80	$78,014	$1,870	$0	$0	CV
2021	March 31, 2021	$69.53	$0.57	2,820.77	$196,128	$1,125	$4,154	$1,620	FDR	2,056.29	$142,974	$820	$109,556	$42,727	CV
2022	March 31, 2022	$75.96	$0.55	2,770.42	$210,441	$1,067	$9,806	$3,825	FDR	1,984.19	$150,719	$764	$14,042	$5,477	CV
2023	March 31, 2023	$69.96	$0.40	2,711.77	$189,715	$759	$10,522	$4,104	FDR	1,984.19	$138,814	$556	$0	$0	CV
2024	March 28, 2024	$87.74	$0.75	2,669.60	$234,231	$1,402	$9,486	$3,699	FDR	1,824.91	$160,118	$958	$35,835	$13,975	CV
				Net return	$145,600					Net return	$69,792				
				Total tax	$26,111					Total tax	$82,844				
				ETR	15.21%					ETR	54.28%				
Closing price data: https://finance.yahoo.com/quote/SPHB/history?filter=history&period1=1396224000&period2=1711843200 (accessed April 12, 2024)															
Dividend data: https://finance.yahoo.com/quote/SPHB/history?filter=div&period1=1396224000&period2=1711843200 (accessed April 12, 2024)															

Table 1.3

SPLV 2014-2024				FDR						CV					
Tax year	**Closing date**	**Price**	**Divs**	**Shares held**	**Value**	**Div val**	**FDR income**	**Tax**	**Method**	**Shares held**	**Value**	**Div val**	**CV income**	**Tax**	**Method**
2014	March 31, 2014	$27.38		3,652.30	$100,000					3,652.30	$100,000				
2015	March 31, 2015	$31.26	$0.88	3,589.92	$112,221	$2,211	$5,000	$1,950	FDR	3,475.50	$108,644	$2,141	$14,171	$5,527	CV
2016	March 31, 2016	$34.00	$0.86	3,525.56	$119,869	$2,122	$5,611	$2,188	FDR	3,341.71	$113,618	$2,012	$11,664	$4,549	CV
2017	March 31, 2017	$37.42	$0.88	3,463.09	$129,589	$2,133	$5,993	$2,337	FDR	3,201.64	$119,805	$1,972	$13,440	$5,242	CV
2018	March 29, 2018	$41.30	$0.96	3,401.91	$140,499	$2,286	$6,479	$2,527	FDR	3,065.71	$126,614	$2,060	$14,395	$5,614	CV
2019	March 29, 2019	$47.31	$1.07	3,344.00	$158,205	$2,505	$7,025	$2,740	FDR	2,896.84	$137,049	$2,170	$20,485	$7,989	CV
2020	March 31, 2020	$43.16	$1.28	3,272.52	$141,242	$2,932	$7,910	$3,085	FDR	2,896.84	$125,028	$2,596	$0	$0	CV
2021	March 31, 2021	$54.59	$1.09	3,222.07	$175,893	$2,458	$7,062	$2,754	FDR	2,641.74	$144,213	$2,016	$35,706	$13,926	CV
2022	March 31, 2022	$64.02	$1.03	3,168.49	$202,847	$2,284	$8,795	$3,430	FDR	2,477.71	$158,623	$1,786	$26,927	$10,502	CV
2023	March 31, 2023	$60.87	$1.38	3,103.51	$188,911	$2,998	$10,142	$3,956	FDR	2,477.71	$150,818	$2,393	$0	$0	CV
2024	March 28, 2024	$65.87	$1.54	3,047.58	$200,744	$3,285	$9,446	$3,684	FDR	2,390.19	$157,442	$2,577	$14,782	$5,765	CV
				Net return	$125,961					**Net return**	$79,164				
				Total tax	$28,651					**Total tax**	$59,112				
				ETR	18.53%					**ETR**	42.75%				
Closing price data: https://finance.yahoo.com/quote/SPLV/history?filter=history&period1=1396224000&period2=1711843200 (accessed April 12, 2024)															
Dividend data: https://finance.yahoo.com/quote/SPLV/history?filter=div&period1=1396224000&period2=1711843200 (accessed April 12, 2024)															

Table 1.4