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Who's Left to Tax? Grappling With A Dwindling Shareholder Tax Base

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Who's Left to Tax? Grappling With A Dwindling Shareholder Tax Base

by Steven M. Rosenthal and Livia Mucciolo

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In this article, Rosenthal and Mucciolo confirm and update the extent of the shift in U.S. corporate stock ownership from taxable shareholders to foreign investors and domestic tax-exempt shareholders, and they examine the tax policy implications of that shift.

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I. Introduction

From 1965 to 2022, the share of outstanding U.S. stock held in taxable brokerage and mutual fund accounts declined from 79 percent to 27 percent (see Table 5[1]), as reflected in data from the financial accounts of the U.S. government collected by the Federal Reserve.[2] The share of publicly traded stock held in taxable accounts similarly declined from 81 percent to 28 percent (see Table 7). Foreign investors, retirement accounts, and other tax-exempt entities now dominate U.S. stock ownership.[3]

First publicly reported in 2016,[4] the pronounced shift from taxable to tax-exempt shareholders complicates tax policy. Policymakers who seek to increase shareholder taxes, for instance, must grapple with a relatively small group of taxable accounts. Policymakers pursuing corporate tax cuts could send a large share of the benefit to foreign investors, at least in the short run.[5] And policymakers seeking to stem corporate stock buybacks must address the tax advantages of buybacks over dividends to foreign shareholders — and to a lesser extent to domestic shareholders.

This study updates and confirms the earlier-reported shift in stock ownership from taxable to tax-exempt accounts. It examines both the total

[1]All tables are located in the Appendix.

[2]Federal Reserve, "Financial Accounts of the United States: Flow of Funds, Balance Sheets, and Integrated Macroeconomic Accounts, Third Quarter 2023" (Dec. 7, 2023).

[3]We treat foreign investors as tax exempt, despite occasional tax payments by foreign investors on dividend distributions. Foreign investors almost always are exempt on their capital gains and, with the rise of stock buybacks, receive fewer dividends (and are taxed at reduced rates on those distributions when they do).

[4]*See* Steven M. Rosenthal and Lydia Austin, "The Dwindling Taxable Share of U.S. Corporate Stock," *Tax Notes*, May 16, 2016, p. 923 (describing the ownership shift for publicly traded U.S. stock); Rosenthal's testimony before the Senate Finance Committee, "Integrating the Corporate and Individual Tax Systems: The Dividends Paid Deduction Considered" (May 17, 2016). *See also* Leonard E. Burman, Kimberly A. Clausing, and Austin, "Is U.S. Corporate Income Double-Taxed?" 70 *Nat'l Tax J.* 675 (2017) (corroborating the ownership shift first observed by Rosenthal and Austin).

[5]*See* Rosenthal, "Slashing Corporate Taxes: Foreign Investors Are Surprise Winners," *Tax Notes*, Oct. 23, 2017, p. 559.

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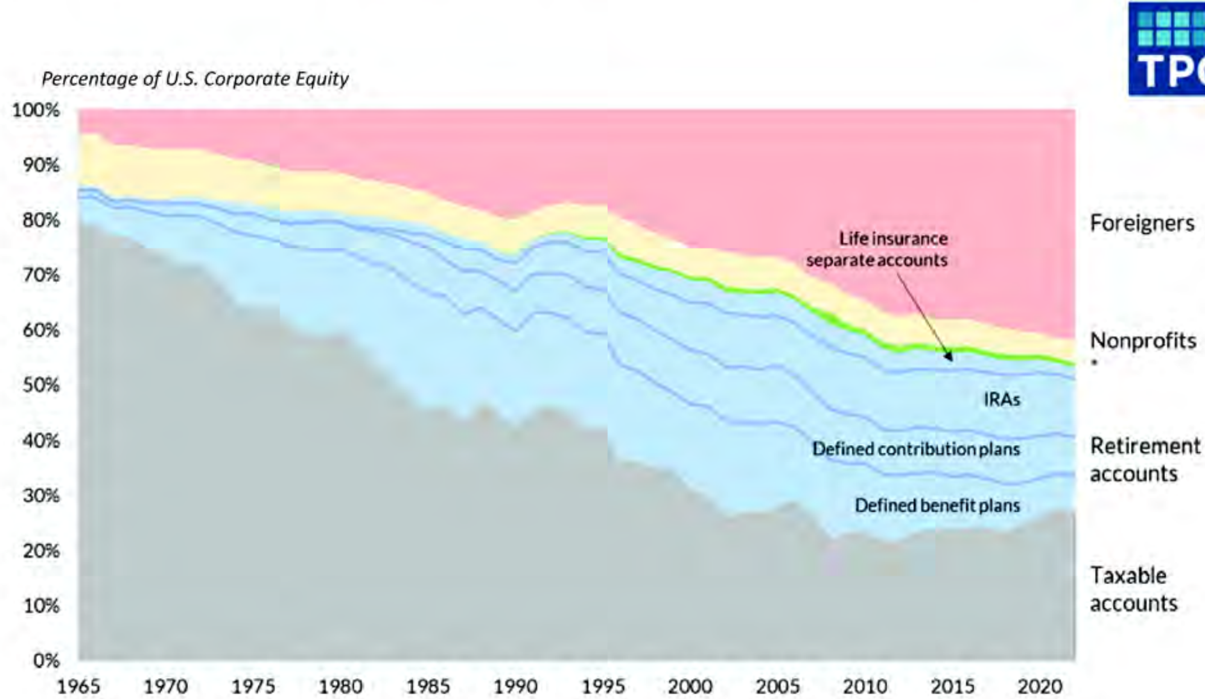
Figure 1. Ownership of U.S. Corporate Stock, 1965-2022 (direct and indirect holdings)



Source: Board of Governors of the Federal Reserve System, "Financial Accounts of the United States"; Tax Policy Center calculations.
*Federal, state, and local government holdings, including equity in 529 college savings plans.

holdings of U.S. equity (which includes foreign direct investment (FDI) (10 percent or greater holdings in a U.S. company) and publicly traded stock holdings only, which do not include FDI. It details more fully in the Appendix the method used to document the shift.

Policymakers have begun to address the challenges to corporate tax policies presented by the shift in stock ownership from taxable to foreign and other tax-exempt investors. In particular, they have begun to reflect this important change into discussions on the long-debated issues of corporate tax integration, corporate tax incidence, and the taxation of stock buybacks and dividends. This study also describes those efforts.

II. Shifting U.S. Corporate Equity

U.S. corporate equity is owned by both domestic and foreign investors. It may be either publicly traded or closely held (that is, not publicly traded). Closely held corporate equity includes ownership of shares in nontraded C and S corporations.[6] The Federal Reserve reports ownership of publicly traded and closely held (both C and S corporation) stock separately.[7]

Foreign investors own U.S. corporate equity as either FDI or portfolio investments. In the United States, FDI is the ownership or control, by a foreign person or entity, of 10 percent or more of the voting securities of an incorporated U.S. business enterprise, or the equivalent interest in an unincorporated U.S. business enterprise.[8] Foreign investment that is not direct investment is portfolio investment.

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[6] C corporations are traditional corporations, which are subject to the corporate income tax, and S corporations are corporations that have elected a special (tax-exempt) status with the IRS to pass through their income to their shareholders, who pay any tax due on their personal returns at individual rates.

[7] *See* Federal Reserve, *supra* note 2, at Table L.224, lines 29 and 30.

[8] Alicia M. Quijano, "A Guide to BEA Statistics on Foreign Direct Investments in the United States," 70 *Survey Current Bus.* 29 (Feb. 1990) (Bureau of Economic Analysis (BEA) monthly journal).

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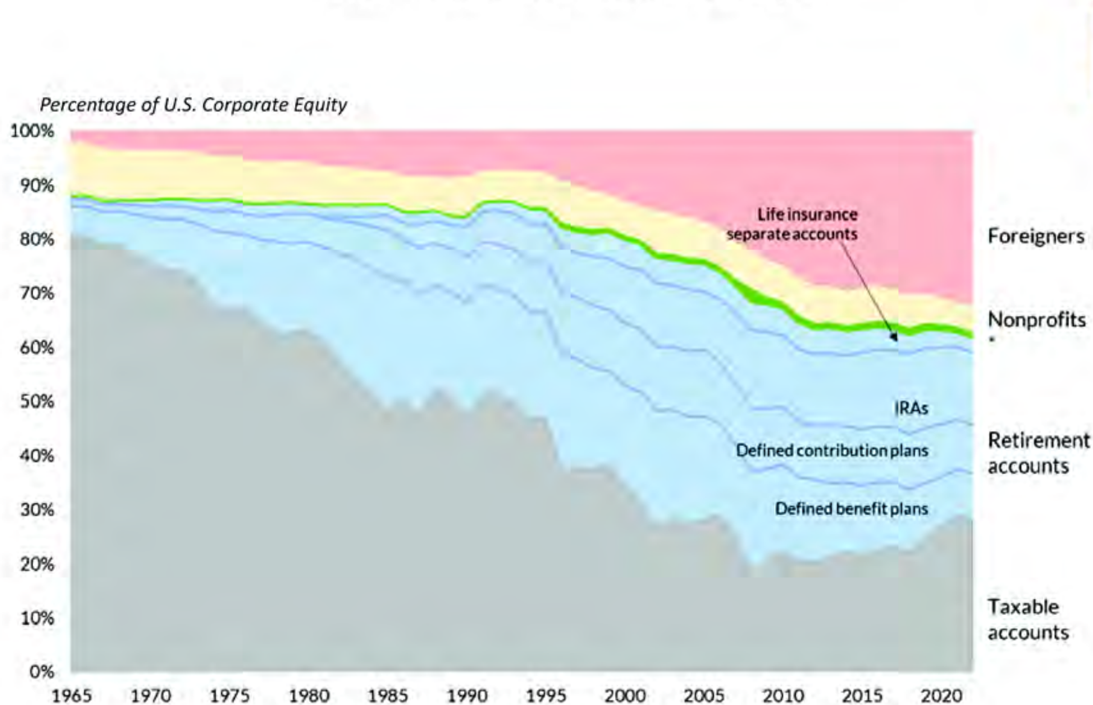
Figure 2. Ownership of U.S. Publicly Traded Corporate Stock, 1965-2022 (direct and indirect holdings)



Source: Board of Governors of the Federal Reserve System, "Financial Accounts of the United States"; Tax Policy Center calculations.
*Federal, state, and local government holdings, including equity in 529 college savings plans.

Examples: FDI would include the whole ownership of a U.S. subsidiary by an international conglomerate like the German company Siemens AG. Portfolio stock would include the ownership of a small stake of the outstanding shares of a U.S. publicly traded corporation like Apple by a sovereign wealth fund like Norway's.

U.S. taxable accounts once dominated both the total and publicly traded stock markets, but now foreign investors, domestic retirement accounts, and other tax-exempt entities (including charities and endowments) predominate. The shift in stock ownership is striking, whether we examine the ownership of total U.S. stock outstanding or only the publicly traded portion.[9] (See figures 1 and 2.)

Each figure — total stock ownership and just the publicly traded portion — is important for analyzing different aspects of corporate tax policy. Knowing how much of total corporate stock is owned by foreigners helps answer the question of how much of the benefit from, say, a corporate tax rate cut will flow to overseas investors versus domestic ones (that is, is a corporate tax cut really "America First"?). Calculating the proportion of foreign owners of publicly traded stock helps weigh the impact of certain policies like the new buyback excise tax, since only publicly traded U.S. corporations are subject to that tax.

A. Ownership of Total U.S. Corporate Equity

The share of total U.S. equity[10] in taxable accounts has fallen sharply, from about 79 percent in 1965 to just 27 percent in 2022 (Figure 1 and Table 5). The big slide actually ended in 2008, when the percentage of stock in taxable accounts leveled out, and then rose slowly as the stock market recovered from the Great Recession.

[9] We define publicly traded U.S. stock as all U.S. stock outstanding less (1) closely held corporate equity and (2) FDI.

[10] Other than S (and other passthrough) corporate equity.

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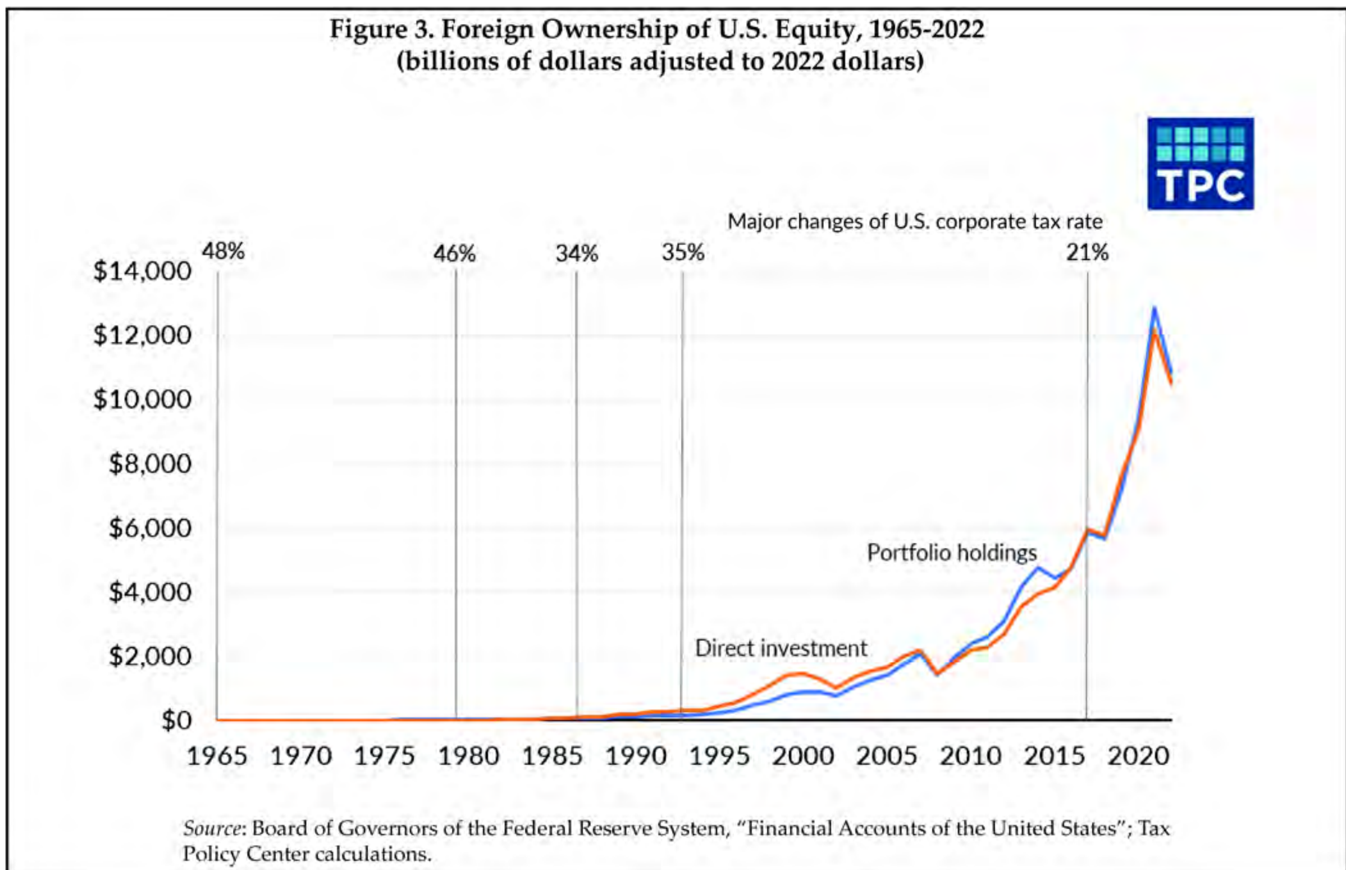

B. Ownership of Publicly Traded U.S. Stock Only

Publicly traded stock is composed of total U.S. equity outstanding less (1) closely held corporate equity and (2) FDI. The share of publicly traded stock held by taxable investors has likewise fallen sharply since 1965, from 81 percent to 28 percent (Figure 2 and Table 7).

III. Foreign and Retirement Investors

A. Foreign Investors

The foreign share of total U.S. corporate equity grew sharply over the past few decades. Foreigners held just 16 percent of total U.S. equity in 1986 but increased their share steadily in subsequent decades to 20 percent in 1996, 31 percent in 2007, and 42 percent at the end of 2022. (For publicly traded stock, the equivalent figures are 8, 9, 21, and 32 percent.)

This growth is largely attributable to the United States' favorable tax treatment of foreign investors. That favorable treatment begins with the U.S. policy of taxing foreign investors only on income that is derived from U.S. sources. But by the federal government's definition, that does not include capital gains from the sale of U.S. investment assets, which generally are sourced to the residence of the seller rather than the location of the asset or the market on which the sale occurred.[11] So a French seller of Amazon stock on the New York Stock Exchange generally would not owe U.S. tax on any capital gains.

By contrast, dividends are sourced to the residence of the payer, so dividends paid by U.S. corporations to foreign investors are considered U.S. source.[12] For example, dividends paid by Intel to a Japanese owner would be subject to U.S. taxes. By statute, dividends paid to foreign investors are subject to a 30 percent tax rate, without any allowance for deductions attributable to the income.[13] However, the rate is

[11] Section 865(a). Capital gains from the sale of U.S. real property are an exception to this rule.

[12] Section 861(a)(2).

[13] Section 871(a)(1).

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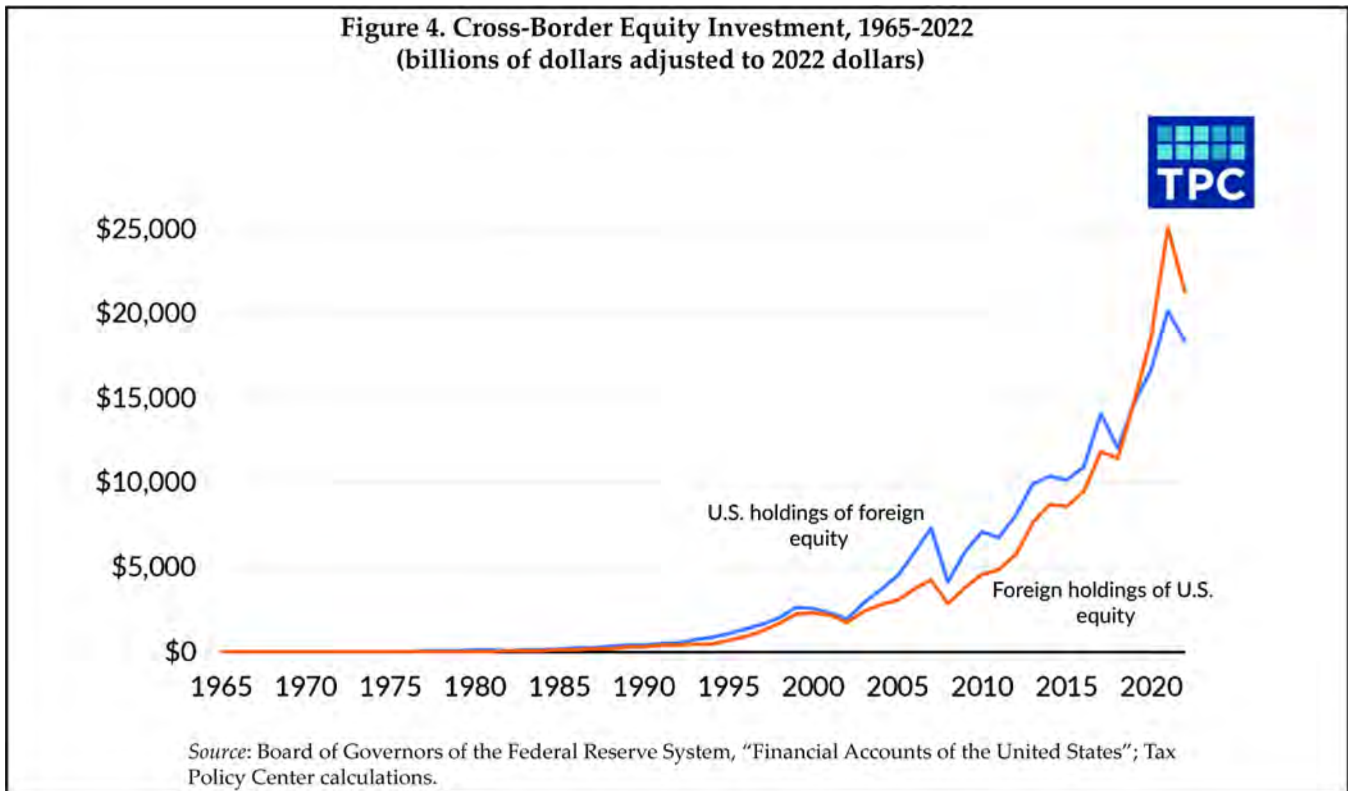

often reduced by tax treaties between the United States and the home country of the foreign investor: from 30 percent to 15 percent on *portfolio* investment dividends, for example, and 5 percent or even 0 percent on dividends from *direct investments*. As described later, publicly traded U.S. corporations increasingly use stock buybacks rather than dividends to distribute profits to their shareholders. The result is that foreign stock investors are generally exempt from U.S. income tax — completely for their capital gains, and to a large extent on the dividends that have become a less significant part of shareholder returns in recent years.

Both portfolio and direct investment by foreigners in U.S. equities increased dramatically, and at a similar rate, over the last two decades. (See Figure 3.) Although the U.S. Bureau of Economic Analysis (BEA) defines FDI as any stake of 10 percent or greater in a U.S. firm, that direct investment almost always takes the form of majority ownership.[14]

Over the last several decades, Congress repeatedly slashed the U.S. corporate income tax rate, in part to attract foreign investment. Foreign countries, too, reduced their corporate income tax rates, also in part to attract foreign investment in the increasingly globalized capital markets.[15]

For most of the last 60 years, total foreign holdings of U.S. equities rose at a similar clip as U.S. holdings of foreign equity.[16] (See Figure 4.) However, in recent years, the value of U.S. equity

[14] U.S. corporations that are more than 50 percent controlled by foreigners make up more than 90 percent of the FDI by employment and assets. *See* BEA, "International Economic Accounts" (last modified Sept. 20, 2023).

[15] Cristina Enache, "Corporate Tax Rates Around the World, 2023," Tax Foundation (Dec. 12, 2023).

[16] Europe predominantly accounted for FDI in the United States, with Asia second, and Canada a distant third (the same order goes for U.S. investment abroad). BEA release, "Direct Investment by Country and Industry, 2022" (July 20, 2023).

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Figure 5. U.S. Corporate Stock in Retirement Accounts, 1965-2022

Source: Board of Governors of the Federal Reserve System, "Financial Accounts of the United States"; Tax Policy Center calculations.

held by foreign residents grew much faster as a result of sharp increases in U.S. equity prices.[17]

B. Retirement Investors

After foreign investors, the largest holder of U.S. stock is domestic tax-exempt retirement accounts. While these accounts held only about 7 percent of total U.S. equity in 1965, they held about 27 percent in 2022. (For publicly traded stock, the equivalent figures are 7 percent and 34 percent.)

There are several different kinds of retirement plans.[18] (See Figure 5.)

The oldest retirement arrangements, defined benefit (DB) plans, generally make annuity payments to retired workers based on years of work and earnings.[19] They started in the late 19th century after some employers began to pay employees a percentage of their salary upon disability or retirement.[20] DB plans took hold during World War II, when employers could not raise wages because of wage and price controls

[17] *See* Andrew Atkeson, Jonanthan Heathcote, and Fabrizio Perri, "The End of Privilege: A Reexamination of the Net Foreign Asset Position of the United States" (July 12, 2023) (finding that "the welfare impact of rising [corporate] asset values for a representative U.S. household has been quite negative given extensive foreign ownership of U.S. corporate equity").

[18] In total, retirement tax benefits are the largest income tax expenditure on the books, costing several hundreds of billions of dollars a year. Joint Committee on Taxation, "Estimates of Federal Tax Expenditures for Fiscal Years 2023-2027," JCX-59-23 (Dec. 7, 2023).

[19] "What Are Defined Benefit Plans?" Tax Policy Center Briefing Book, at ch. 3 (updated May 2020).

[20] *See* Elizabeth A. Myers et al., "Pensions and Individual Retirement Accounts (IRAs): An Overview," Congressional Research Service, R47119 (June 1, 2022).

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and thus increased other forms of compensation, such as pensions.[21]

For tax purposes, an employer can deduct contributions to a DB plan. Later, employees include retirement payments in their taxable income. DB plans generally are fully funded (that is, sufficient funds are set aside to pay for promised future benefits), and the income on the funds set aside is tax exempt. To qualify under current tax rules, a DB plan is capped on how much it can pay each retiree annually. This limit increases each year with inflation; in 2024, it is $275,000.[22]

Both private and public employers can offer DB plans. However, over time, most private employers turned away from DB plans because of their large long-term funding burdens.[23] In 1965 DB plans accounted for more than 70 percent of the stock held in retirement arrangements, but by 2022 they made up only about 25 percent. And as a share of total U.S. equity held, DB plans fell from a high of 22 percent in 1985 to 7 percent in 2022. As of 2022, government pension plans accounted for about 75 percent of the stock held by DB plans.[24]

As the name implies, defined contributions (DC) plans contrast with DB plans in that they set only the amount of contributions that go into the employee's account, not the amount that will be paid out upon retirement.[25] The employee owns the account, the balance in which — and therefore the ultimate size of its later distributions — depends on the size of the contributions and the accumulated returns on investments, including stock. The maximum combined employer and employee contribution is capped each year. For 2024, the limit is $69,000, with an extra $7,500 catch-up contribution by employees aged 50 or over, for a maximum total of $76,500.[26]

Though versions of DC plans existed earlier, Congress first codified them in section 401(k) in 1978, which took effect in 1980.[27] Since then, DC plans have remained popular and have held around 7 percent of total U.S. equity for the last four decades. DC plans now include section 401(k) plans, section 403(b) plans for nonprofit employees, section 457(b) plans for state and local government employees, and the federal government's Thrift Savings Plan.

Congress introduced traditional IRAs in 1974 and expanded eligibility widely in 1981 (to all workers, regardless of their participation in an employer pension plan). A different form of IRA, the Roth, was added to the system in 1997. IRAs are like DC plans, but without an employer's participation. Since 1981 IRAs have grown steadily and now hold 11 percent of total U.S. equity. Congress initially set the IRA contribution cap at $1,500, but it's now $7,000, with an extra $1,000 catch-up contribution for older workers, for a maximum total of $8,000. The largest increase occurred in 2001, when Congress increased the limit from $2,000 to $5,000 over a five-year phase-in and added the extra $1,000 catch-up.

The steady hikes in the contribution limits for IRAs are, in small part, responsible for their larger stock market share, but more responsible is the growth in contribution limits for employer plans (both DC and, to a lesser extent, DB plans[28]). That's because most of the growth in IRAs' holdings has been fueled by rollovers of large balances in employer plans, which is permitted upon job changes and retirement.[29]

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[21] *Id.* at 2.

[22] Notice 2023-75, 2023-47 IRB 1256.

[23] Nathan Bomey, "'It's Really Over': Corporate Pensions Head for Extinction as Nature of Retirement Plans Changes," *USA Today*, Dec. 31, 2019.

[24] Because the governments must ultimately make the promised pension payments regardless of the performance of the stock, we could consider taxpayers as the beneficial owners of the stock held in public sector DB plans. *See* Alan J. Auerbach, "Who Bears the Corporate Tax? A Review of What We Know," 20 *Tax Pol'y & Econ.* 1, 7 (2006).

[25] "What Are Defined Contribution Retirement Plans?" Tax Policy Center Briefing Book (updated May 2020).

[26] Notice 2023-75.

[27] Before 1980 some employers offered their employees deferred cash and profit-sharing plans, which the IRS first approved but later questioned. *See* JCT, "General Explanation of the Revenue Act of 1978," JCS-7-79, at 82-84 (Mar. 12, 1979).

[28] In the last two decades there's been an explosion of cash balance plans, which technically are DB plans but function like DC plans. *See* FuturePlan, "National Cash Balance Research Report" (Mar. 2023). The benefit of a cash balance plan is stated in terms of an account balance, not ultimate payouts. A cash balance plan can be rolled over into an IRA upon one's leaving a job. For 2021, assets in cash balance plans were about $1.3 trillion, while assets in traditional DB plans were about $2.4 trillion. Employee Benefits Security Administration, "Private Pension Plan Bulletin" (July 26, 2023).

[29] Sarah Holden and Daniel Schrass, "The Role of IRAs in US Households' Saving for Retirement, 2018," 24 *ICI Res. Persp.* (Dec. 2018). Rollovers of balances in cash balance plans to IRAs, described above, are a recent phenomenon.

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Investment income earned by retirement accounts generally is tax exempt. That's true whether the income is from assets held in a DB plan, DC plan, or IRA. And it's true whether the IRA is a Roth IRA (with taxes on contributions paid upfront) or a traditional IRA (with taxes paid on distributions at the back end). And if tax rates remain constant, the tax exemption for Roth and traditional IRAs generally is equivalent.[30]

Life insurance companies hold stock in segregated reserves to fund whole life insurance and annuity contracts.[31] Whole life insurance (that is, insurance contracts with a cash value) and annuities are similar to other tax-favored vehicles such as retirement plans — including section 401(k) plans and section 529 qualified tuition programs — because investment growth is not taxed as it accrues and assets held until death may escape income tax entirely.[32] Since 1960 ownership of life insurance policies has declined, with rates of cash value life insurance ownership declining most rapidly.[33] Stock holdings in segregated accounts as a share of the total market have shown little change over the period we studied.

IV. Rethinking Corporate Taxes

A. Taxing Corporate Profits More Effectively

The taxation of U.S. corporate profits often is criticized for occurring twice: once to corporations, then again to shareholders (upon, for example, distribution of the profits). Many observers have complained that the two levels of tax distort important business decisions, including whether to establish as a corporation, partnership, or other business form; whether to finance with debt or equity; and whether to retain or distribute earnings.

But the real problem is not that corporate profits are taxed twice; it's that they are taxed ineffectively each time. The shift from taxable to nontaxable shareholders is just one manifestation of that larger problem.

Corporate tax receipts as a share of the economy have fallen greatly over the last 60 years, from 3.6 percent of GDP in 1965 to 1.7 percent in 2022. This decline, often observed, is attributable in part to the shift of business profits from traditional C corporations to S corporations, partnerships, and other passthrough entities.[34] These entities pass through their profits, without taxation, to their owners, who pay any tax due on their individual returns. But the decline in corporate tax receipts is also attributable to the sharp decline in the top corporate income tax rate over the same period, from 48 percent to 21 percent, as well as to artificial profit shifting through transfer pricing and other devices.[35]

From 1965 to 2022, the share of U.S. stock held by taxable shareholders dropped from 79 percent to 27 percent. The top tax rate for dividends received by these shareholders dropped from 70 percent to 23.8 percent, and for capital gains from 25 percent to 23.8 percent (and unrealized capital gains continue to disappear for tax purposes if they are held until death).

Paradoxically, addressing the double taxation of corporate profits could be a way to strengthen taxation of corporate capital. It might be easier to properly tax these profits if that taxation occurred only once, but comprehensively.

This sought-after tax reform of reducing two corporate taxes to one is called "corporate integration." One method to achieve it would be to eliminate the corporate-level tax altogether and instead collect more from shareholders. Some commentators have supported that plan with the observation that corporations generally are more mobile than their shareholders — able, at least on

[30] *See* Burman, William G. Gale, and Aaron Krupkin, "Roth IRAs Versus Traditional IRAs: Implications for Individuals and Government," Tax Policy Center (Sept. 5, 2019) ("Investment income accrued with both Roth IRAs and traditional IRAs is effectively tax free over the life of the account. This is obvious for Roth IRAs, because earnings on the accounts and withdrawals are never subject to income tax. But it's also true for traditional accounts because the up-front tax deduction effectively represents the government's share of the individual's investment."). *See also* "What's the Difference Between Front-Loaded and Back-Loaded Retirement Accounts?" Tax Policy Center Briefing Book (updated May 2020).

[31] The insurance companies are not subject to tax on the income from the segregated accounts. Rather, the beneficiaries themselves will generally be subject to tax to the extent that payments exceed basis.

[32] JCT, "Present Law and Background on the Income Taxation of High Income and High Wealth Taxpayers," JCX-51-23, at 68 (Nov. 7, 2023).

[33] Daniel Hartley, Anna Paulson, and Katerina Powers, "What Explains the Decline in Life Insurance Ownership?" *Econ. Persp.*, Federal Reserve Bank of Chicago (2017).

[34] "What Are Pass-Through Businesses?" Tax Policy Center Briefing Book (updated May 2020).

[35] *See, e.g.*, Clausing, "5 Lessons on Profit Shifting From U.S. Country-by-Country Data," *Tax Notes Federal*, Nov. 9, 2020, p. 925. *See also* Reuven S. Avi-Yonah et al., "Commensurate With Income: IRS Nonenforcement Has Cost $1 Trillion," *Tax Notes Federal*, May 22, 2023, p. 1297.

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paper, to quickly, easily, and frequently change taxing jurisdictions in search of a better deal — and are therefore harder to tax.[36] And indeed, collecting taxes from corporations with U.S. operations has proven difficult in recent years because of profit shifting and other tax-dodging strategies.

In 2016 the Senate Finance Committee held hearings on corporate integration. The committee's plan would have allowed corporations to deduct dividends paid to shareholders, which would have effectively eliminated the corporate-level tax on earnings.[37] Higher taxes on shareholders — who would benefit from the increased stock prices of tax-free companies and, presumably, the greater dividends that the companies could pay — would help make up the shortfall. Orrin Hatch, committee chair at the time, correctly observed that "if done right, corporate integration promises to eliminate the distortive double taxation of corporate earnings and further modernize the tax code."[38]

But the transformed nature of stock ownership in recent decades — from overwhelmingly taxable to overwhelmingly nontaxable — doomed that plan to failure.[39] As one of the authors of this report testified to Hatch's committee at the time, relatively few shareholders are subject to income tax on their stock holdings these days (and they are taxed at reduced rates).[40] To keep Hatch's shift of taxes from corporations to shareholders revenue neutral, Congress would have needed to substantially increase the tax rate on dividends and capital gains — or broaden the tax base by eliminating the exemptions of currently tax-exempt accounts and institutions. Neither was politically viable, so Hatch's effort failed.

B. Determining Corporate Tax Incidence

In 2017 Congress reduced the U.S. corporate tax rate from 35 percent to 21 percent but did not increase taxes on the income that shareholders derive from their stock holdings.[41] As a result, shareholders benefitted, indirectly, from lower corporate taxes without paying more taxes directly.

As described earlier, the vast majority of stock owners benefiting from lower corporate taxes are tax exempt, with foreign investors constituting the most sizable portion by far. Noting this shift, Paul Krugman, the Nobel Prize-winning economics columnist for *The New York Times*, facetiously described the corporate tax relief enjoyed by offshore investors from the 2017 law as a "$700 billion foreign aid program."[42]

Of course, there is much debate about who benefits when corporate taxes go down (and who pays when they go up).[43] Those impacts, called "tax incidence," ripple through the economy over time.

In the short run, it's clear that reducing corporate income taxes increases after-tax returns for capital invested in the companies and thus benefits the owners of corporate capital — that is,

[36] *See* Eric Toder and Alan D. Viard, "Major Surgery Needed: A Call for Structural Reform of the U.S. Corporate Income Tax," Tax Policy Center (Apr. 4, 2014). Those authors later proposed to cut the corporate rate to 15 percent, not eliminate it. Toder and Viard, "Replacing Corporate Tax Revenues With a Mark-to-Market Tax on Shareholder Income," 69 *Nat'l Tax J.* 701 (Sept. 2016). Similarly, Harry Grubert and Rosanne Altshuler proposed to lower the corporate tax rate to 15 percent and increase the tax rate for dividends and gains to shareholders. *See* Grubert and Altshuler, "Shifting the Burden of Taxation From the Corporate to the Personal Level and Getting the Corporate Tax Rate Down to 15 Percent," 69 *Nat'l Tax J.* 643 (Sept. 2016). Rather than publicly traded stock being marked to market, they would impose a deferred interest charge on gains from stock when the stock is sold.

[37] Senate Finance Committee release, "Hatch to Hold Finance Hearing on Corporate Integration" (May 11, 2016).

[38] *Id.*

[39] To evaluate corporate integration, only holdings of publicly traded stock should be considered (*i.e.*, FDI should be ignored). That's because tax on earnings attributable to FDIs effectively is integrated already: The U.S. subsidiary pays tax on its earnings, but the foreign parent — despite a statutory 30 percent U.S. tax rate on dividends received by foreign investors — typically pays little (often 5 percent) or no tax on dividends thanks to tax treaties that the United States maintains.

[40] Rosenthal testimony, *supra* note 4.

[41] "An Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution of the Budget for Fiscal Year 2018," P.L. 115-97, commonly known as the Tax Cuts and Jobs Act. The TCJA's reduction in the corporate tax rate was only partially offset by the broadening of the corporate tax base.

[42] Krugman, "Trump's $700 Billion Foreign Aid Program," *New York Times Blog* (Oct. 25, 2017) ("OK, this analysis from Steven M. Rosenthal at the Tax Policy Center is revelatory. It makes a simple point, but one everyone — myself included — somehow missed: the Trump tax plan is a huge giveaway to foreigners.").

[43] Reducing corporate income tax rates, narrowing the corporate tax base, or increasing corporate tax incentives are alternative ways to lower corporate taxes. *See, e.g.*, Institute on Taxation and Economic Policy, "Impacts of the Tax Relief for American Families and Workers Act" (Feb. 2, 2024) (estimating that foreign investors would benefit by $20 billion with extensions of corporate incentives for research and development, investment, and interest expense in pending legislation).

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the shareholders.[44] Krugman argues that reaching the long run can take many years — more than a dozen — just to achieve half the adjustment.[45] As he explained, "One does not simply unbolt machines in other countries from the floor and roll them into America the next week."

The two official federal budget scorekeepers, Treasury and the Joint Committee on Taxation, acknowledge the short-run incidence of a corporate tax but exalt the long run, after the tax ripples through the economy.[46]

Using this framework, the two scorekeepers project that cutting corporate taxes will eventually benefit all owners of capital, and to a lesser degree, U.S. workers. That is because as the after-tax returns for capital invested in the corporate sector increase, capital from the noncorporate sector is drawn to the corporate sector, which increases the returns to capital still invested in the noncorporate sector.[47] The reduction in corporate taxes also might increase returns to labor because workers in the corporate sector are more productive with more capital to work with and could demand higher wages.[48] (The reverse also would be true: An increase in corporate taxes would reduce returns both to capital and labor.)

But even after accepting this long-run hypothesis, the exact split of the incidence of corporate taxes between capital and labor is a matter of speculation. Treasury assigns 82 percent of the benefit of reducing corporate taxes (or the burden of increasing them) to capital and 18 percent to labor. The JCT assigns 75 percent of the incidence to capital and 25 percent to labor. According to both formulations, the corporate tax still is overwhelmingly borne by capital holders, including foreign investors, even as labor bears a minor share.

However, there is considerable confusion on the assignment of the benefit or burden of changes in corporate tax policy to foreign investors. Treasury's official distribution allocates no impact at all to overseas shareholders. The JCT allocates a portion of the burden on capital to foreign investors, but only for their portfolio holdings, not their FDI. (It's easy to miss FDI because the Fed reports direct investments on a table separate from other holdings of corporate equity.[49]) But reducing corporate taxes benefits both a foreign investor that holds a small amount of stock in its portfolio and one that wholly owns a U.S. corporation.[50]

Though these structural errors persist, government scorekeepers now are beginning to account more fully for foreign stock holdings. When the Biden administration proposed to raise the corporate income tax rate to 28 percent, it explained that a "significant share of the effects of the corporate tax increase would be borne by foreign investors."[51] And recently, JCT economists, in an unofficial paper, acknowledged

[44]For existing shareholders, the effect is instantaneous through the process of capitalization, as a stock's price rises to reflect anticipated higher after-tax earnings (or falls to reflect lower after-tax earnings). Auerbach, *supra* note 24, at 10.

[45]Krugman, "The Transfer Problem and Tax Incidence (Insanely Wonkish)," *New York Times Blog* (Oct. 5, 2017). *See also* Auerbach, *supra* note 24, at 10 ("while computers can be moved from one office to another, it is considerably more difficult to turn a nuclear power plant into a tractor").

[46]Julie-Anne Cronin, "U.S. Treasury Distributional Analysis Methodology," Treasury Office of Tax Analysis (May 2022); Cronin et al., "Distributing the Corporate Income Tax: Revised U.S. Treasury Methodology," Treasury Office of Tax Analysis (May 2012); JCT, "Modeling the Distribution of Taxes on Business Income," JCX-14-13 (Oct. 16, 2013).

[47]Arnold C. Harberger, "The Incidence of the Corporate Income Tax," 70 *J. Pol. Econ.* 215 (1962).

[48]However, the corporations' owners also would be the sole beneficiaries, even in the long run, to the extent that corporate income tax is collected from supernormal returns (*i.e.*, a return that is greater than the normal return, which typically is attributable to intangible property that is unique to the company). That is because shareholders that earn supernormal returns would not shift their capital in response to tax rate changes. And supernormal returns are large and have been getting larger, increasing from 60 percent to about 75 percent of the U.S. corporate tax base over the period of 1992-2013. Laura Power and Austin Frerick, "Have Excess Returns to Corporations Been Increasing Over Time?" 69 *Nat'l Tax J.* 831 (2016). *See also* Edward G. Fox, "Does Capital Bear the U.S. Corporate Tax After All? New Evidence From Corporate Tax Returns," 17 *J. Empirical Legal Stud.* 71 (2020); Fox and Zachary Liscow, "A Case for Higher Corporate Tax Rates," *Tax Notes Federal*, June 22, 2020, p. 2021.

[49]Federal Reserve, *supra* note 2, at Table L.225.a, "Direct Investment Equity," not Table L.224, "Corporate Equities of the Financial Accounts." Last year the Fed shifted direct investment equity (formerly at Table L.230, now at Table L.225) closer to other corporate equity (Table L.224).

[50]Foreign corporations often operate their U.S. businesses as branches (*i.e.*, unincorporate). But for U.S. tax purposes, branches are effectively treated as corporations.

[51]*See* Treasury, "General Explanations of the Administration's Fiscal Year 2025 Revenue Proposals" (Mar. 11, 2024). When the Biden administration first proposed the increase, it explained, "Since foreign shareholders own a significant share of U.S. equities, much of the benefits of the corporate tax cut accrued to foreign, rather than U.S. investors." Treasury, "The Made in America Tax Plan," at 5 (Apr. 2021) (citing an early draft of this article).

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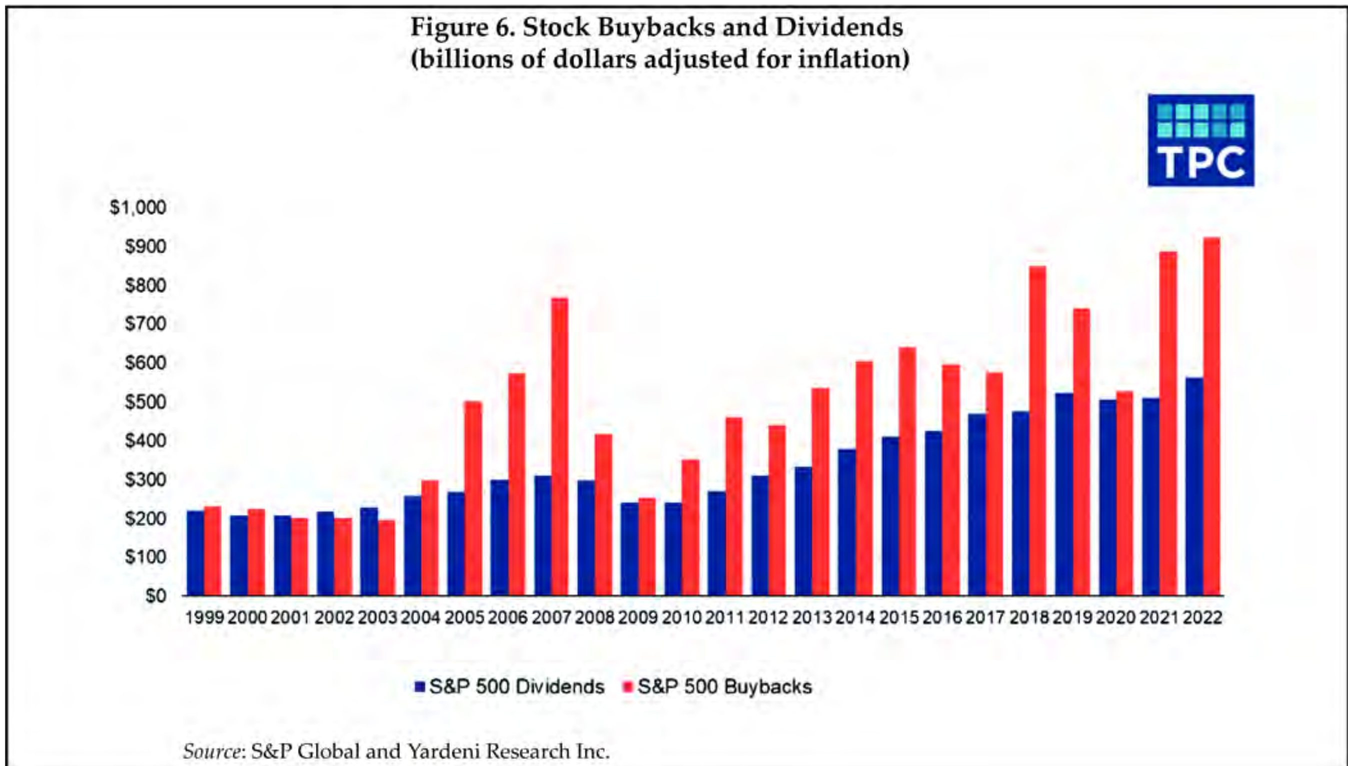

Source: S&P Global and Yardeni Research Inc.

the significance of the large share of U.S. stock owned by foreign investors.[52]

In sum, the drastic change in the nature of corporate shareholders — from largely domestic investors with taxable accounts to mostly untaxed foreign investors and retirement account holders — adds a further wrinkle to the study of tax incidence. Taxable shareholders simply are in short supply. And it's not enough to determine how much impact a change in corporate tax policy has on shareholders; rather, the analysis must consider who those shareholders are and how they are taxed.

C. Taxing Distributions More Equitably

Publicly traded companies now spend more than $1 trillion annually to repurchase their own stock. Those buybacks far surpass cash dividends, which used to be the main way corporations distributed profits to their shareholders. (See Figure 6.)

The rise in foreign ownership of publicly traded U.S. corporate stock fueled the shift to buybacks. As the share of foreign ownership of U.S. publicly traded stock tripled over the last three decades, the ratio of buybacks to dividends doubled.[53]

For foreign investors, the preference for buybacks is particularly clear: As noted earlier, the United States generally does not tax foreigners on the capital gains that stock buybacks can produce. By contrast, dividends paid to foreign investors on *portfolio* stock are subject to a withholding tax, which is 30 percent under U.S. law — though it often is reduced to 15 percent by treaty (treaties typically reduce the tax for *direct investment* to 5 percent or 0 percent). So capital gains from selling portfolio stock are never taxed to foreign investors, whereas dividends from portfolio investments are.

Also, for some domestic investors, buybacks are more attractive than dividends, even though both are taxed at the same top rate of 23.8 percent. First, a portion of the cash received by individuals who sell stock in a buyback is a recovery of

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[52] *See* Patrick J. Kennedy et al., "The Efficiency-Equity Tradeoff of the Corporate Income Tax: Evidence From the Tax Cuts and Jobs Act" (Nov. 14, 2023) (asserting, correctly, that foreign investors owned about 38 percent of C corporation equity in 2016).

[53] Rosenthal and Thomas Brosy, "Stock Buyback Excise Taxes: What We Know and Don't Know," TaxVox Blog (Mar. 10, 2023).

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invested capital (cost basis) and is not taxable, while for dividends, the entire amount of cash received is taxable. Also, buybacks, unlike dividends, are taxed to a particular investor only if the investor takes an affirmative step: selling her appreciated stock. That is, the shareholder controls the timing of taxation. These advantages to buybacks for domestic investors, although important, are substantially smaller than the advantages of buybacks for foreign investors.

In a separate paper, we estimated, based on effective tax rates, the U.S. tax advantage for buybacks over dividends at 7.2 percent before any excise taxes.[54] We estimate that about two-thirds of the total U.S. tax advantage is attributable to foreign shareholders, largely stemming from their exemption from capital gains taxes.

To reduce the tax advantage of buybacks over dividends, the Inflation Reduction Act of 2022 introduced a 1 percent excise tax on the value of stock buybacks by U.S. publicly traded corporations.[55] Yet buybacks have not been slowed, presumably because the 1 percent excise tax is too small.

In its fiscal 2025 budget, the Biden administration noted that the buyback tax as constituted had not proven much of a curb on the practice, and it proposed that the levy be quadrupled to 4 percent. The budget predicted that "increasing the tax rate on buybacks would reduce [the] disparity" between buybacks and dividends.[56] From our calculations, even a 4 percent buyback tax still would leave buybacks with a tax advantage over dividends.[57] Our estimates suggest that increasing the buyback excise tax could raise additional federal revenue and still leave a tax advantage for buybacks.

V. Conclusion

The transformation over the past 60 years in the nature of U.S. stock ownership from overwhelmingly domestic taxable accounts to overwhelmingly foreign and tax-exempt investors has many important policy implications, including how we can most effectively tax corporate profits; who is affected by changes in corporate taxation; and the form of corporate payouts to shareholders. Policymakers must continue the process, only now beginning, of grappling with the dwindling shareholder tax base.

VI. Appendix: Methodology

We draw our data largely from quarterly reports by the Federal Reserve, which tally the total value of U.S. corporate equity issued, as well as the value of stocks issued by foreign corporations but held by U.S. residents.[58] The Fed allocates the holdings of these corporate equities to one of 17 business and governmental categories and assigns the remaining equities to a residual category, which it labels the "household sector."[59]

But the Fed's awkward sorting of the data obscures our tax trends. Most importantly, the Fed's residual category — the household sector — includes stock held by nonprofit institutions, not just stock held by U.S. households, as traditionally viewed. The Fed also combines taxable and tax-exempt stock holdings by U.S. households, such as taxable holdings in brokerage accounts and tax-exempt holdings in IRAs. Finally, the Fed does not allocate the stock held by passthrough corporations, such as mutual funds, to the stock's beneficial owners (that is, the owners of the passthrough corporations).[60]

[54] Brosy and Rosenthal, "What Is the U.S. Tax Advantage of Stock Buybacks Over Dividends?" Tax Policy Center (forthcoming 2024).

[55] Rosenthal, "New Buyback Excise Tax Snares Foreign Investors," TaxVox Blog (Aug. 16, 2022).

[56] Sens. Sherrod Brown, D-Ohio, and Ron Wyden, D-Ore., likewise have introduced legislation to increase the buyback excise tax rate to 4 percent. Brown release, "Brown, Wyden Introduce Legislation to Increase Tax on Stock Buybacks" (Feb. 14, 2023).

[57] By comparison, Penn Wharton estimates the tax advantage to buybacks at 4.6 percent with a stylized model that ignores U.S. tax advantages to foreign shareholders. Wharton, "The Excise Tax on Stock Repurchases: Effects on Shareholder Tax Burdens and Federal Revenues" (Mar. 9, 2023). CRS estimates the tax advantage to buybacks at 9.875 percent, without reducing for future tax savings as we do. Jane G. Gravelle, "The 1 Percent Excise Tax on Stock Repurchases (Buybacks)," CRS, R47397 (updated Feb. 15, 2023).

[58] Federal Reserve, *supra* note 2, at Table L.224.

[59] The Fed's 18 categories of holders are the household sector, nonfinancial corporations, the federal government, state and local governments, monetary authority, U.S.-chartered depository institutions, foreign banking offices in the United States, property casualty insurance companies, life insurance companies, private pension funds, federal government retirement funds, state and local government retirement funds, mutual funds, CEFs, ETFs, brokers and dealers, other financial business, and "the rest of the world." The household sector includes taxable accounts, as well as IRAs, section 529 holdings, and nonprofit organizations.

[60] A beneficial owner is a person that enjoys the benefits of ownership even though the title to the property is held by another person.

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To unravel the Fed's data, we replace its 18 categories with eight new ones, grouped by tax attributes, allocating the Fed categories accordingly. We calculate, separately, the share that each of these tax categories represents both for total U.S. equity and publicly traded U.S. equity alone. We track the changes in relative shares of the two types of stock held in the eight tax categories from 1965 to 2022.

Below, for 2022 we (1) reorganize the Fed's categories, (2) subtract stock issued by passthrough corporations and allocate the stock held by them to their owners, (3) subtract foreign-issued stock and add FDI in U.S. equity to determine holdings of total U.S. equity, and (4) remove stock issued by closely held corporations and FDI, to calculate the holdings of publicly traded U.S. stock only.

We start with the Fed's estimate of total corporate stock held, which the Fed sets equal to total stock issued. We reassign equity from the Fed's holder categories to tax holder categories — which become our numerators — and total equity issued, our denominator. At each step of our calculations, we balance our tax numerators and tax denominator, thereby hewing close to the Fed's premise: Total stock held must equal total stock issued.

The data collection and modification are all intended to get the most accurate picture possible of who owns U.S. corporate equity. In several instances, we made simplifying assumptions, which we describe below.

Step 1: Remove double-counted corporate equity and reorganize Fed categories.

To avoid double counting the value of corporate equity, we subtract the value of stock that is held by other corporations (that is, intercorporate holdings) from both our numerator and denominator.[61] (See tables 1 and 2.)

Example: If Corporation A holds stock of Corporation B, the owners of Corporation A beneficially own a stake in Corporation B's stock. To avoid double counting, we subtract the value of the stock that Corporation A holds in Corporation B.[62]

Once we subtract intercorporate holdings, 11 categories of Fed holders remain, as shown on the left side of Table 1. We consolidate these 11 categories into nine categories of holders, which we group by tax attributes, as shown on the right side of Table 1: foreigners, life insurance separate accounts, DB plans, DC plans, IRAs, government, nonprofits, taxable accounts, and passthrough corporate holders (mutual funds, exchange-traded funds (ETFs), and closed-end funds (CEFs)).[63]

We then allocate the stock that is held in the Fed's residual category — the household sector — to taxable and tax-exempt holders (IRAs, section 529 plans, and nonprofits). As noted earlier, the Fed includes equity holdings by nonprofit institutions in the household sector. From 1988 to 2000, the Fed determined the equity that was held by nonprofits based on Fed surveys and IRS data (but later, the Fed reported corporate equities and mutual fund holdings, in combination, by nonprofits). For the periods before 1988 and after 2000, we extrapolate the share of equities (of equities and mutual funds) held by nonprofits. We also estimate the stock that is directly held in self-directed brokerage accounts of IRAs and in section 529 plans.[64]

For our tax denominator, we simply subtract intercorporate holdings of corporate equity, as shown in Table 2.

As a check, the equity issuances in Table 2 equal the equity held in Table 1.

[61] Life insurance companies hold stock in their general accounts for the company's benefit, and separate accounts for their customers' benefit. We treat the stock held in general accounts as intercorporate but treat the stock held in separate accounts as customers'.

[62] The extra level of corporate ownership effectively increases the tax burden for stock that is held through these structures, although the tax law mitigates the burden by permitting a deduction to a corporation for dividends received from another corporation. Auerbach, *supra* note 24, at 7.

[63] For assets in section 529 savings plans, see Federal Reserve, *supra* note 2, at Table B.101, line 43. Life insurance separate account equity holdings are on Table 116.s, line 6. Private DB plan equity holdings are on Table L.118.b, line 12. Private DC plan equity holdings are on Table L.118.c, line 12. Federal DB plan equity holdings are on Table L.119.b, line 9. Federal DC plan equity holdings are on Table L.119.c, line 9. And state and local defined plan equity holdings are on Table L.120.b, line 12.

[64] Section 529 plans are a small, but tax-exempt, holder of equities. Section 529 plans don't fit squarely in any of our tax-exempt holders. We allocate section 529 plans to the nominal holders (state governments), although often the section 529 plan beneficial owners are individuals (*i.e.*, individuals effectively own the assets in the college savings plans, but not the tuition guarantee programs).

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Table 1. U.S. Corporate Equity Holdings (tax numerator)

Fed. Categories of Equity Holders (in bold)	
All equity holdings less intercorporate holdings	**$61,440**
Rest of the world	$10,840
Life insurance companies; separate accounts	$505
Private pensions	$2,934
Private pension funds; DB plans (move to DB plan category)	$1,040
Private pension funds; DC plans (move to DC plan category)	$1,894
Federal government retirement funds	$419
Federal government; DB plans (move to DB plan category)	$16
Federal government; DC plans (move to DC plan category)	$403
State and local government; DB plans (move to DB plan category)	$2,985
Federal government (move to government category)	$33
State and local governments (move to government category)	$239
Mutual funds (move to passthrough holdings category)	$11,867
Closed-end funds (move to passthrough holdings category)	$99
Exchange-traded funds (move to passthrough holdings category)	$5,059
Household sector	$26,460
IRAs (make into IRAs category)	$4,310
529 college savings plans (move to government category)	$266
Nonprofits (make into nonprofits category)	$2,106
Taxable accounts (make into taxable accounts)	$19,778

Market values in billions of dollars, 2022

Tax Categories of Equity Holders (in bold)	
All equity holdings less intercorporate holdings	**$61,440**
Foreigners	$10,840
Life insurance separate accounts	$505
DB Plans	$4,041
Private pension funds; DB plans	$1,040
Federal government; DB plans	$16
State and local government; DB plans	$2,985
DC Plans	$2,297
Private pension funds; DC plans	$1,894
Federal government; DC plans	$403
IRAs	$4,310
Government	$538
529 college savings plan	$266
Federal government	$33
State and local governments	$239
Nonprofits	$2,106
Taxable accounts	$19,778
Passthrough holdings (mutual funds, ETFs, CEFs)	$17,025
Mutual funds	$11,867
Closed-end funds	$99
Exchange-traded funds	$5,059

Table 2. U.S. Corporate Equity Issuances (tax denominator)

Total corporate equity issuances (issued or held in the U.S.)	$64,702
− Intercorporate holdings of corporate equity	($3,262)
= Equity issuances less Intercorporate holdings	**$61,440**

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Table 3. Remove Passthrough Issuances and Allocate Passthrough Holdings

	Equity holdings (direct and indirect)	– Passthrough issuances (ETFs, CEFs, REITs, S Corps)	+ Passthrough holdings (mutual funds, ETFs, CEFs)	= Total holdings
Equity holdings less intercorporate holdings	$61,440	($13,668)		$47,772
Foreigners	$10,840	($487)	$1,037	$11,390
Nonprofits	$2,106	($400)	$851	$2,557
Government	$538	($50)	$106	$594
Life insurance separate accounts	$505	($668)	$1,422	$1,259
DB Plans	$4,041	($191)	$407	$4,257
DC Plans	$2,297	($2,177)	$4,229	$4,349
IRAs	$4,310	($2,080)	$4,427	$6,657
Taxable accounts	$19,778	($7,615)	$4,546	$16,709
Passthrough holdings (mutual funds, ETFs, CEFs)	$17,025		$17,025	

Table 4. U.S. Corporate Equity Issuances

Total corporate equity issuances (issued or held in the U.S.) less intercorporate holdings	$61,440
– Passthrough issuances (tax-transparent)	($13,668)
= Equity issuances less Intercorporate holdings, passthrough issuances	**$47,772**

Step 2: Subtract equity issued (and add equity held) by passthrough entities.

Next, we remove stock issued by several specialized types of investment companies — ETFs, CEFs, and real estate investment trusts — and by S corporations. These corporate entities are passthroughs, which pay no corporate tax. Instead, they pass through their earnings to their owners, who pay any tax due on their individual returns at personal rates.[65] (See tables 3 and 4.)

The Fed excludes issuances by mutual funds as equity, but it counts the issuances of other passthrough corporations as equity. To be consistent, we also subtract the equity *issued* by these other passthrough entities ($13,668).

We then allocate the equity *held* by passthrough entities ($17,025) to their owners (that is, to one of our remaining eight tax categories of holders).[66] We are assisted in this task by the Fed's reporting of the stock held by mutual funds, ETFs, and CEFs.[67] The Fed also reports the share of mutual funds owned by different kinds of investors — individuals, companies, governments, etc. — which allows us to assign the stock held by mutual funds to their owners.[68] Although the Fed does not break down the owners of ETFs and CEFs, we assume the owners are proportionally the same as the owners of regular mutual fund shares. We then assign the corporate equity that is held by mutual funds, CEFs, and ETFs to their owners, within our eight remaining categories. The configuration of equity issued and held by passthroughs is shown in tables 3 and 4.

Again, the total stock held and the total stock issued balance.

[65] Hedge funds and private equity funds are partnerships, which are passthroughs for tax purposes. The Fed leaves stock that is held by *domestic* hedge and private equity funds in its household sector, the residual category. Federal Reserve, "Enhanced Financial Accounts: Hedge Funds" (Dec. 15, 2023). The Fed allocates stock that is held by *foreign* hedge and private equity funds to foreign investors. In theory, we ought to reallocate the funds' holdings to the funds' owners, and allocate among our owner categories, but we lacked the data to do so. However, we estimate the amounts of U.S. equity that would be reallocated from foreign to domestic investors, on net, would be relatively small, about 1 percent of publicly traded U.S. equity and 2 percent of total U.S. equity, based on data compiled by the Fed (Federal Reserve, *supra* note 2, at Table B.101.f, line 17) and the SEC Division of Investment Management, "Private Fund Statistics" (Jan. 9, 2024).

[66] As noted above, the Fed already subtracted issuances by mutual funds, which is why the issuances that we subtract are less than the holdings that we add.

[67] Federal Reserve, *supra* note 2. Corporate equities held by mutual funds are on Table L.122, line 12; ETFs are on Table L.124, line 6; and CEFs are on Table L.123, line 6. REITs generally own real property and mortgages — not stocks. We also do not assign stock that is held by S corporations, which the Fed correctly leaves in the residual household sector (*i.e.*, taxable shareholders generally are the only owners of S corporation stock.)

[68] The Fed reports the holders of mutual fund shares on Table L.224.

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Table 5. Remove Foreign-Issued Stock and Add Foreign Direct Investment (FDI)

	Total Equity	- Foreign-Issued Stock	+ Share of FDI	= All U.S. Equity	Share of Equity
Total holdings	$47,772	($10,306)	$10,477	$47,943	
Foreigners	$11,390		$8,660	$20,050	42%
Nonprofits	$2,557	($724)	$128	$1,961	4%
Government	$594	($168)	$30	$456	1%
Life insurance separate accounts	$1,259	($357)	$63	$965	2%
DB Plans	$4,257	($1,206)	$213	$3,264	7%
DC Plans	$4,349	($1,232)	$217	$3,335	7%
IRAs	$6,657	($1,886)	$333	$5,104	11%
Taxable accounts	$16,709	-$4,733	$835	$12,810	27%

Table 6. U.S. Corporate Equity Issuances

Total corporate equity issuances (issued or held in the U.S.) less intercorporate holdings, and passthrough issuances	$47,772
- Foreign-issued stock	($10,306)
+ FDI	$10,477
= U.S. corporate equity issuances	$47,943

Step 3: Subtract foreign-issued equity and add FDI in U.S. equity.

Next, we remove the share of foreign-issued stock that the Fed assigns to U.S. residents since we are interested only in the ownership of U.S. stock. The Fed does not report which U.S. residents own the foreign-issued stock, so for simplicity we assume that foreign-issued stock is held proportionately — about 28 percent — by each category of U.S. holder (that is, we assume that U.S. residents hold the same mix of domestic- and foreign-issued stock).[69] (See tables 5 and 6.)

We also add FDI, which, as described earlier, are large stakes in U.S. corporations, typically subsidiaries of foreign multinational corporations.[70] Some U.S. residents own the stock of these foreign multinational corporations, so they effectively own U.S. stock indirectly through their offshore holdings. We allocate these indirect holdings across our U.S. holders.[71]

The subtraction of foreign-issued stock and the addition of FDI are displayed in tables 5 and 6, which yields our allocation of total U.S. equity.[72]

Step 4: Subtract closely held equity and FDI to isolate publicly traded U.S. equity.

For our final step, we remove stock issued by closely held C corporations — stock that is not publicly traded (we previously removed stock held by S corporations). We subtract that closely held stock from taxable holders, not tax-exempt holders.[73] We also remove the FDI that we included in our prior step. (See tables 7 and 8.)

Tables 7 and 8 display this final step, which yields our allocation of publicly traded stock. We also confirm that publicly traded U.S. stock holdings and issuances still balance.

[69] Foreign equity held by U.S. residents/total equity held by U.S. residents = $10,306/($47,772 - $11,390) ≈ 28 percent.

[70] Federal Reserve, *supra* note 2. FDI equity values can be found on Table L.225.a, line 18.

[71] Using data from the World Federation of Exchanges, we estimate the percentage of all foreign publicly traded equity owned by U.S. investors to have been about 17 percent in 2022.

[72] We allocate some FDI to U.S. residents to reflect their holdings of the foreign corporations that make the FDI.

[73] Because of tax rule limitations, IRAs and other retirement accounts rarely own stock issued by closely held C corporations.

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Table 7. Remove Closely-Held Equity and Share of Foreign Direct Investment (FDI)

	Total Equity	– Closely-Held C Corp Equity	– Share of FDI	= All Publicly Traded Equity	Share of Equity
Total holdings	$47,943	($1,940)	($10,477)	$35,526	
Foreigners	$20,050		($8,660)	$11,390	32%
Nonprofits	$1,961		($128)	$1,833	5%
Government	$456		($30)	$426	1%
Life insurance separate accounts	$965		($63)	$902	3%
DB Plans	$3,264		($213)	$3,051	9%
DC Plans	$3,335		($217)	$3,117	9%
IRAs	$5,104		($333)	$4,771	13%
Taxable accounts	$12,810	($1,940)	($835)	$10,036	28%

Table 8. U.S. Corporate Equity Issuances

Total corporate equity issuances (issued or held in the U.S.) less intercorporate holdings, passthrough issuances, and foreign-issued stock, plus FDI	$47,943
– Closely-held equity	($1,940)
– Share of FDI	($10,477)
= Publicly traded equity	**$35,526**

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