

DATA

The data used in this brief are anonymized data derived from repeated years of tax records at the Internal Revenue Service. The data was drawn from form 1040, schedules, and information returns such as W-2s. Here we use taxable income and information on capital gains from form 1040 and more detailed information on long-term capital gains from Schedule D for all returns with taxable income greater than or equal to \$1 million in 2018 dollars in any tax year from 1998 to 2021. We checked for anomalies in the data and benchmarked the data against summary statistics published by the IRS. More information is available in Appendix A.

Analysis

We analyze the potential for millionaires to avoid a surtax on capital gains in several steps. First, to understand the degree to which a millionaire surtax affects the same taxpayers over time, we calculate how persistently taxpayers have incomes over \$1 million. To compare our results with similar calculations in Carroll (2010), we cover a similar period.

While \$1 million of income is a common threshold, proposals to raise taxes on capital income above that threshold do not always define income. Possibly the simplest definition would be gross earnings before deductions and taxes. A more common measure is adjusted gross income (AGI), which adjusts for contributions to retirement accounts, investment income, alimony, foreign earned income of those living abroad, and other subtractions. Tax statistics produced by the Internal Revenue Service (IRS) frequently use this definition. In addition, there are many types of modified adjusted gross incomes (MAGI). For example, the threshold for the net investment income tax (NIIT) uses AGI but without any exclusion of foreign earned income. Taxable income further narrows the definition by subtracting additional deductions.

Here we focus on taxable income because it is the definition used by the Biden administration in its latest proposed budget (US Dept of Treasury 2023). However, using taxable income allows some taxpayers to move below the threshold not just by timing realizations —the focus of this brief — but also by increasing deductions. For example, taxpayers could pair realizations with large charitable contributions. We therefore present in Appendix B tables that reproduce the tables from the body of this paper but using AGI instead of taxable income. Appendix C briefly describes the relationship between itemized charitable contributions and long-run capital gains. These tables provide at least the potential for some taxpayers to offset their gains with contributions and slip below the \$1 million threshold for taxable income.

To determine the potential to avoid the surtax, we calculate the number of tax returns with at least \$1 million of taxable income, with and without long-term capital gains. We then estimate the ability of taxpayers to avoid the surtax through three methods that shift the timing of realizations. The first two methods shift realized gains over five years and over ten years. The third method, never realizing gains subject to the surtax, is addressed by recent proposals to tax unrealized gains at death. The first two methods, on the other hand, are not.

Millionaires are not the same group of people over time. Many people, even those with high incomes, have stable or generally increasing incomes based on wages and salaries. But temporary salary increases, such as bonuses or income from personally owned businesses, can temporarily raise incomes above \$1 million. Others are only occasionally or uniquely a millionaire when they realize long-term capital gains.

This gives many taxpayers some control over the degree to which they would be subject to a tax increase that starts at a \$1 million threshold. Over the long run, people can take lower-paying jobs, or take jobs with untaxed perquisites in lieu of taxable income. Alternatively, they could obtain access to unrealized gains by borrowing money using assets with unrealized gains as collateral.

Here we examine the effectiveness of a simple strategy: adjusting gains over many years rather than realizing them in one year, which would push taxable income above the \$1 million threshold. To start, we calculate how many taxpayers are over the \$1 million threshold because of their capital gains.

In Table 1 we report the number of taxpayers with at least \$1 million in taxable income, both with and without long-term capital gains.³ Over the 2002-2011 time period, more than 380,000 taxpayers had at least \$1 million in taxable income for only one year. This represents more than 45 percent of the 837,000 taxpayers with income above the threshold for at least one year. About 132,000 taxpayers (16 percent) exceeded the threshold for two years over the same time-period.

This sharp drop is consistent with Carroll (2010). Using a panel of data from 1999 through 2008, he calculated the number years in which taxpayers had a modified AGI (MAGI) that exceeded \$1 million in 2007 dollars. He found that only 16 percent of taxpayers had more than \$1 million in MAGI for two years of the sample.

Table 1 also shows that being a millionaire for longer periods is increasingly uncommon. Those with millionaire incomes for one or two years represent 61 percent of the total, and 72 percent were millionaires for three or fewer years (Carroll found that about two-thirds of taxpayers were millionaires for one or two years, and just under three-quarters were for three or fewer years). Slightly more than 20,000 taxpayers crossed the threshold for nine more years, while less than 4 percent cross the threshold every year.

TABLE 1

Persistence of High-Income Taxpayers, 2002–2011 and 2012–2021
 Number of years that tax units have at least \$1 million in taxable income with and without long-term capital gains (2018 price-adjusted dollars)

Number of years	Taxable income, 2002 to 2011		Taxable income, 2012 to 2021	
	including LTCCG (a)	excluding LTCCG (b)	including LTCCG (c)	excluding LTCCG (d)
1	380,121	241,246	362,458	250,028
2	131,914	101,066	171,615	131,320
3	79,763	64,345	96,969	79,669
4	56,902	46,866	70,770	59,504
5	45,618	37,861	53,244	45,374
6	37,636	30,875	43,248	36,562
7	29,587	24,904	37,691	31,735
8	23,633	20,225	34,428	28,586
9	20,645	17,586	34,978	28,532
10	30,878	26,154	52,869	40,629
Total	836,697	611,128	958,270	731,939

Source: Authors' tabulations of IRS data.

Notes: Sample includes all tax filers ages 20 to 60 at the beginning of the period who ever had taxable income including capital gains over \$1 million (2018 price-adjusted dollars) during the period. LTCCG = long-term capital gains

(a, c) taxable income including capital gains is the taxable income as reported on form 1040.

(b, d) taxable income excluding all long-term capital gains (positive sum of schedule D lines 8a, 8b, 9, 10, 11, 12, 13, (14)).

Column (b) shows that of the one-year millionaires, about 241,000, or just under two-thirds, are millionaires even if long-term capital gains are not included. Thus, about one-third of these taxpayers are millionaires only because of their capital

³ All amounts are in 2018 price-adjusted dollars. Net long-term capital gains are the total of net long-term capital gains reported on Schedule D. For the 2022 tax year, this is found on line 15 of Schedule D or reported on form 1040 line 7 for filers not required to file Schedule D. We limit table 1 to taxpayers whose primary tax payer is between ages 20 and 60 at the beginning of the period.

gains realizations. The remaining two-thirds represents taxpayers experiencing other one-time events. Similarly, about one-quarter of the two-year millionaires only exceed the threshold because of long-term capital gains. For those with taxable income that exceeds \$1 million for three through nine years, the share of taxpayers that were millionaires because of capital gains generally declined from 19 percent down to 15 percent at 10 years. Thus, the more frequently that a taxpayer is a millionaire, the less likely capital gains are the deciding factor.

The 31,000 taxpayers that consistently exceed \$1 million in taxable income without long-term capital gains cannot change the timing of their gains to avoid a tax increase on the gains of millionaires. These may represent the taxpayers that are the object of proposals to impose a millionaire surtax, but they represent only about 4 percent of the taxpayers described in Table 1. The other 96 percent are either occasional millionaires or they have the potential to avoid the tax by changing the timing of their long-term capital gains realizations.

In columns (c) and (d) we show the results of a similar analysis over the years 2012-2021. This period did not experience a major financial crisis, although it does include two years of the COVID-19 pandemic. Again, most taxpayers exceeded the threshold only one time, and only 6 percent of taxpayers exceeded it every year. About 30 percent of the single-year taxpayers exceeded the threshold because of capital gains. Nearly one-quarter, however, exceeded the threshold every year because of their capital gains. Slightly less than 95 percent are either only occasional millionaires or they have the potential to time their realizations.

We explore this potential in Table 2 by calculating the number of taxpayers with more than \$1 million of taxable income including and excluding long-term capital gains, and the amount of gains that could be subject to a tax on millionaire gains, for the years 1999 through 2021. The number of millionaires rises and falls with the economy, falling from 351,000 in 2000 down to 231,000 in 2002 (just after the 2001 recession). It rises again to 431,000 by 2007, down to 236,000 during the Great Recession and then rising almost every year through 2020. The decline to 507,000 in 2021 may represent the effects of the COVID-19 pandemic. Although long-term capital gains also vary with the overall economy (presumably through financial markets), column (b) shows a similar pattern for those taxpayers that cannot escape a tax on capital gains. Mirroring the pattern shown in column (a), the number of taxpayers in column (b) peaked in 2000, bottomed out in 2002 before peaking again in 2007 and bottoming out in 2009. Over subsequent years it generally rose until 2020 before falling in 2021.

Unsurprisingly, these movements with the market are relatively stronger with capital gains, which are both voluntary and are strongly influenced by financial markets, than for other sources of income. This implies, as we show in column (c), that the percentage of taxpayers that can fall below the threshold by not realizing gains also rises and falls with the economy. In 2000, 33 percent of those with \$1 million in taxable income would have fallen below that threshold if they had not realized their gains. This share falls to 20 percent in 2002, then rises again through 2007 before falling to 13 percent in 2009 and rising roughly thereafter.

These figures represent total long-term capital gains, which includes gains from the sale of personally held capital assets, but also installment sales, gains from partnerships, S corporations, estates and trust, capital gains distributions from mutual funds reported on Schedule D, and other sources.

Although this is the broadest measure of capital gains, it may include gains from assets that are not easily sold. For example, estates and trusts may be highly structured vehicles for holding assets that do not allow for strategic timing of realizations and shifting realizations from partnerships and S corporations may need agreement from other investors with different priorities. Much of the research on the response of capital gains to taxation focuses on gains from the sale of

personally held capital assets, such as stocks and bonds. Dowd, McClelland and Muthachareon (2015) show that gains from these assets are more responsive to changes in tax rates than gains from some other types of assets.⁴

TABLE 2
Number of Taxpayers with Taxable Income With and Without Capital Gains over \$1 Million, 1999–2021
 2018 price-adjusted dollars

Year	Tax units with taxable income including gains over \$1 million (number) (a)	Tax units with taxable income excluding long-term gains over \$1 million (number) (b)	Tax units who are millionaires because of long-term capital gains (percent) (c)	Net long-term capital gains potentially subject to the tax (\$ millions) (d)	Tax units with taxable income excluding personally held gains over \$1 million (number) (e)	Tax units who are millionaires because of personally held gains (percent) (f)
1999	298,312	208,159	30.2	282,664		
2000	351,377	235,955	32.8	372,168		
2001	262,433	202,689	22.8	169,728		
2002	231,040	185,248	19.8	128,654		
2003	247,065	191,759	22.4	152,143		
2004	311,988	224,202	28.1	259,968		
2005	369,047	257,301	30.3	352,925		
2006	403,966	278,832	31.0	414,670		
2007	430,584	295,990	31.3	465,274		
2008	310,202	243,898	21.4	214,033		
2009	236,467	206,280	12.8	107,423		
2010	271,439	225,446	16.9	203,203		
2011	280,218	229,350	18.2	207,062		
2012	360,182	277,668	22.9	377,682	281,853	21.7
2013	318,350	258,722	18.7	212,962	290,350	8.8
2014	379,781	292,200	23.1	344,578	341,443	10.1
2015	395,743	305,662	22.8	343,724	359,253	9.2
2016	380,064	299,289	21.3	301,019	349,090	8.1
2017	415,395	313,068	24.6	393,950	372,310	10.4
2018	463,382	343,245	25.9	436,118	411,819	11.1
2019	467,400	357,000	23.6	410,851	421,437	9.8
2020	513,497	385,711	24.9	517,520	450,538	12.3
2021	506,606	372,757	26.4	806,811	446,084	11.9

Source: Authors' tabulations of IRS data.

Notes: Sample includes all tax units who ever had AGI including capital gains over \$1 million (2018 price-adjusted dollars) in any year from 1999 to 2021.

Filers who report capital gains without filing a Schedule D have gains reported on form 1040 assigned to capital gains distributions reported on Schedule D line 13.

(a) taxable income including capital gains is the taxable income as reported on form 1040 in 2018-price-adjusted dollars.

(b) taxable income excluding all long-term capital gains (positive amounts reported on Schedule D line 15) in 2018 price-adjusted dollars.

(c) Percentage of tax units with taxable income excluding capital gains (schedule D line 15) under \$1 million and taxable income including capital gains over \$1 millions.

(d) Gains subject to the tax is the amount of capital gains included on Schedule D line 15 subject to the millionaire tax. This is the lesser of taxable income over \$1 million or the amount of capital gains reported Schedule D line 15.

(e) taxable income excluding gains on personally held assets (positive sum schedule D line 8a+8b+9+10).

(f) Percentage of tax units with taxable income excluding gains on personally held assets under \$1 million and taxable income including capital gains over \$1 millions.

For that reason, columns (e) and (f) parallel columns (b) and (c), but only considers gains from the sale of personal capital assets, such as stocks and bonds (data were only available starting in 2012). This column shows that about half as many taxpayers have more than \$ 1 million in taxable income excluding these actively traded gains. While this represents only a fraction of all gains, it would be easiest for a taxpayer to adjust the timing of these realizations.

But any change in government revenue would be based on the amount of realizations that could be subject to tax, not the number of affected taxpayers. Column (d) shows that over the 1999–2021 period this amount equals \$7.5 trillion, with \$4.1 trillion subject to the tax from 2012 to 2021.⁵ Assuming a tax increase from 20 percent to 37 percent, a naïve estimate suggests that the increase could have raised \$705 billion over the 2012 to 2021 period.

A revenue estimate, however, would include estimates of tax-avoidance. To form estimates of the gains that could be subject to tax after avoidance, in Table 3 we consider three alternative avoidance strategies, over the time-periods 2002–2011, 2012–2021 and 2002–2021. First, we calculated the total amount of gains in taxable income, the amount of income greater than \$1 million, and the amount of long-term capital gains that would be subject to a tax increase on those with more than \$1 million in income. (In a second brief we estimate the response of those taxpayers to changes in tax rates.) For those taxpayers with incomes above \$1 million even without capital gains, all gains are subject to the tax. For those with incomes excluding capital gains below \$1 million, the amount of long-term gains above \$1 million would be subject to the tax.⁶

While this tax would apply to a small share of taxpayers, it would apply to most long-term capital gains. Over 2002 to 2011, nearly \$4.0 trillion in gains were included in income, of which \$2.5 trillion, or 63 percent of gains, would have been subject to a capital gains surtax. A similar share would have been subject to the tax over the 2012–2021 and 2002–2021 periods, representing \$4.1 trillion and \$6.7 trillion, respectively. Although the tax would have applied to a small number of taxpayers, the capital gains share of their income was substantial. Over the 2002–2021 period 40 percent of income above \$1 million came from long-term capital gains.⁷

We consider three strategies taxpayers could use to avoid paying the millionaire surtax. In each strategy we allow taxpayers to realize long-term capital gains in a way that minimizes the gains that would be subject to the millionaire surtax. Taxpayers defer gains they'd otherwise realize that would push taxable amount above \$1 million to years when their taxable income would without the gains be below \$1 million. In the 5-year scenario, we force taxpayers to realize all stored gains every five years. This 5-year planning horizon may be very long for a typical taxpayer, but those earning at least \$1 million a year are likely to have financial advisers that help plan over long horizons. In the 10-year scenario, we force taxpayers to realize all stored gains every 10 years. This horizon allows taxpayers a great deal of flexibility in arranging their realizations. In the maximum avoidance scenario, we allow taxpayer to retain all surplus gains that would push income above \$1 million until they pass out of the study period.

⁴ Other researchers have found similar results. Examples include Feldstein, Slemrod, and Yitzhaki (1980), Auten and Cordes (1991), Burman and Randolph (1994), and Auerbach and Siegel (2000).

⁵ The extremely large spike in realizations in 2021 (\$860 billion) accompanied by a small increase in the percent of units subject to the tax indicates that some millionaires realized unusually large gains.

⁶ We only consider the surtax on long-term capital gains because short-term capital gains are already taxed at the ordinary tax rate.

⁷ 2020 long term capital gains of \$1.1 trillion are reported on Schedule D are found at <https://www.irs.gov/pub/irs-soi/20in14acg.xls> and 2020 AGI of \$12.6 trillion is found at <https://www.irs.gov/pub/irs-soi/20in14ar.xls>.

TABLE 3

Taxpayers Who Ever Had \$1 Million in Taxable Income
and Various Long-Term Capital Gains Avoidance Strategies, By Time Period
Millions of 2018 price-adjusted dollars

Period	Capital gains included in taxable income	Taxable income over \$1 million	Gains subject to the millionaire tax	Change from baseline			Percent change from baseline		
				Capital gains included in taxable income	Taxable income over \$1 million	Gains subject to the millionaire tax	Capital gains included in taxable income	Taxable income over \$1 million	Gains subject to the millionaire tax
Current tax treatment^a									
2002–2011	3,953,665	6,589,176	2,505,355						
2012–2021	6,114,442	9,982,200	4,145,216						
2002–2021	10,068,108	16,571,377	6,650,571						
Spread gains over 5 years^b									
2002–2011	3,869,443	6,153,845	2,061,587	-84,222	-435,331	-443,768	-2.1	-6.6	-17.7
2012–2021	6,061,142	9,576,202	3,733,431	-53,300	-405,999	-411,784	-0.9	-4.1	-9.9
2002–2021	9,930,585	15,730,047	5,795,018	-137,523	-841,330	-855,553	-1.4	-5.1	-12.9
Spread the gains over 10 years^c									
2002–2011	3,757,480	5,753,629	1,656,782	-196,186	-835,547	-848,573	-5.0	-12.7	-33.9
2012–2021	5,990,446	9,338,697	3,493,942	-123,997	-643,503	-651,274	-2.0	-6.4	-15.7
2002–2021	9,747,926	15,092,326	5,150,724	-320,182	-1,479,050	-1,499,847	-3.2	-8.9	-22.6
Maximum avoidance^d									
2002–2011	2,088,794	4,096,686	0	-1,864,872	-2,492,491	-2,505,355	-47.2	-37.8	-100.0
2012–2021	2,778,427	5,846,403	0	-3,336,016	-4,135,797	-4,145,216	-54.6	-41.4	-100.0
2002–2021	4,867,220	5,846,403	0	-5,200,887	-10,724,974	-6,650,571	-51.7	-64.7	-100.0

Source: Authors' tabulations of IRS data.

Notes: Sample includes all tax filers who ever had over \$1 million in taxable income in any year from 1998 to 2021.

All amounts are in millions of 2018 price-adjusted dollars.

(a) Current tax treatment are amounts reported on form 1040 and Schedule D.

(b) Spread gains over 5 years simulation allows tax payers to shift the timing of long-term capital gains over a 5-year period to reduce the amount of capital gains subject to a millionaire tax.

(c) Spread gains over 10 years simulation allows tax payers to shift the timing of long-term capital gains over a 10-year period to reduce the amount of capital gains subject to a millionaire tax.

(d) Maximum avoidance simulation allows tax payers to shift the timing of capital gains realizations to avoid a millionaire tax. Tax payers can retain capital gains until death.

Filer avoidance behavior is limited to all long-term capital gains (sum of schedule D line 8a, 8b, 9, 10, 11, 12, 13).

Capital gains included in taxable income is the sum of short-term and long-term capital gains including the capital loss carryover and subject to a -\$3,000 loss cap.

Gains subject to the millionaire tax is the lesser of taxable income over \$1 million or capital gains included in taxable income.

Taxable income over \$1 million is the amount of taxable income over \$1 million.

Over the 2002–2011 period, because of taxpayers spreading realizations over five years, gains subject to the tax increase would have decreased by \$444 billion, an 18 percent reduction. However, as described in Table 1, this time-period includes the Great Recession when incomes dipped dramatically. The more recent time-period of 2012–2021, which featured strong economic growth would have only allowed for a 10 percent reduction in gains subject to the tax. Over the two time-periods combined, which presents the results over a variety of macroeconomic conditions, this would have meant a 13 percent reduction in gains subject to the tax.

If taxpayers instead have a ten-year timing horizon, the more flexible timing would have allowed for nearly \$850 billion, or one-third of all gains, to have escaped increased taxes over the 2002–2011 time-period. Over 2012–2021, 16 percent of gains could have escaped additional taxation and over 2002–2021 22 percent could have escaped additional taxation.

⁸

These estimated changes may be overstatements if it is difficult for gains from sources such as estates and trusts lack the ability to quickly re-time realizations. In Table 4 we estimate the reduction in personally held gains subject to the tax. Over a 5-year time horizon, over \$120 billion of personally held gains would have escaped taxation, which constitutes about 3 percent of all long-term gains realized over that time-period. Over the 10-year horizon, gains subject to the tax would have fallen by about \$220 billion, or about 5 percent of all long-term capital gains. If all personally held capital assets were held until death, gains subject to the tax would have fallen by about \$1.4 trillion, or about one-third of all gains.

⁸ We also considered allowing taxpayers to realize gains a year in advance. This slightly increased how much gains could escape the surtax: the 17.7 percent decline over 2002-2011 found in Table 3 becomes 19.5 percent. The 9.9 percent over 2012-2021 becomes 10.8 percent and the 12.9 percent over the entire 2002-2021 period becomes 14.1 percent.

TABLE 4

Taxpayers Who Ever Had \$1 Million in Taxable Income,
by Various Personal Long-Term Capital Gains Avoidance Strategies
Millions of 2018 price-adjusted dollars

Period	Baseline			Change from baseline			Percent change from baseline		
	Capital gains included in taxable income	Taxable income over \$1 million	Gains subject to the millionaire tax	Capital gains included in taxable income	Taxable income over \$1 million	Gains subject to the millionaire tax	Capital gains included in taxable income	Taxable income over \$1 million	Gains subject to the millionaire tax
Current tax treatment^a									
2012–2021	6,114,442	9,982,200	4,145,216						
Spread gains over 5 years^b									
2012–2021	6,163,621	9,857,478	4,022,647	49,179	-124,722	-122,569	0.8	1.2	-3.0
Spread the gains over 10 years^c									
2012–2021	6,130,318	9,757,897	3,922,445	15,875	-224,303	-222,771	0.3	-2.2	-5.4
Maximum avoidance^d									
2012–2021	4,953,395	8,585,365	2,750,550	-1,161,047	-1,396,835	-1,394,666	-19.0	-14.0	-33.6

Source: Authors' tabulations of IRS data.

Notes: Sample includes all tax filers who ever had over \$1 million in taxable income in any year from 1998 to 2021.

All amounts are in millions of 2018 price-adjusted dollars.

(a) Current tax treatment are amounts reported on form 1040 and Schedule D.

(b) Spread gains over 5 years simulation allows tax payers to shift the timing of long-term capital gains over a 5-year period to reduce the amount of capital gains subject to a millionaire tax.

(c) Spread gains over 10 years simulation allows tax payers to shift the timing of long-term capital gains over a 10-year period to reduce the amount of capital gains subject to a millionaire tax.

(d) Maximum avoidance simulation allows tax payers to shift the timing of capital gains realizations to avoid a millionaire tax. Tax payers can retain capital gains until death.

Filer avoidance behavior is limited to personal long-term capital gains (sum of schedule D line 8a, 8b, 9, 10).

Capital gains included in taxable income is the sum of short-term and long-term capital gains including the capital loss carryover and subject to a -\$3,000 loss cap.

Gains subject to the millionaire tax is the lesser of taxable income over \$1 million or capital gains included in taxable income.

DISCUSSION

It is clear that a potentially significant amount of gains could escape taxation by taxpayers strategically realizing gains. This strategy will be more effective over longer time spans and during economic downturns. Longer time spans also make it easier to shift gains that are not personally held. On the other hand, personally held gains are easily shifted over both short and long time-periods.

Combining the two estimates, a 2-percent decline in the realizations of personally held capital assets can be justified as a lower bound on the immediate response to an unanticipated increase in the tax rate on millionaires. A 22 percent decline can be justified as an estimate of the long-range decline in realizations of all capital assets. In a period of economic volatility, a one-third decline in all realizations could occur.

Maximum avoidance could occur in several ways. First, it could mean holding gains until death. Whether that is preferred by a taxpayer will depend on factors such as their rate of return, discount rate, expected life span and desire to leave a bequest. But some taxpayers may defer realizations over shorter time-periods. For example, rather than strategically realizing gains over a 5-year period, a taxpayer could not realize any gains at all, with the hope that the preferential rate is reinstated. Regardless of the time-period, taxpayers may also choose to give away their assets rather than keep them. Under current law, taxpayers who give away gifts of appreciated assets do not pay taxes on the unrealized gains and, if they itemize their deductions, claim the gift as a charitable donation. Over the long run, some taxpayers may choose to keep their income below the threshold by reducing their investments. They could, for example, choose to consume their income rather than save and invest it. Taxpayers may also engage in evasion by moving assets abroad.

The results presented here only consider timing changes. Changes in deductions, such as charitable giving, would lead to additional reductions in capital gains that could be potentially exposed to the tax increase. The results should therefore be seen as lower bounds on the actual amount that would avoid additional taxation. Of course, contributions to charity can be viewed as a social good, thus incentivizing charitable contributions may be seen as a benefit rather than a cost. If it is viewed as a cost, however, it could be avoided by defining the threshold in terms of AGI rather than taxable income.

CONCLUSION

In this research we explore who would be subject to a tax on millionaires, how frequently, and their ability to respond by re-timing their realizations. We find that over a 10-year period nearly half of taxpayers who earn at least \$1 million of taxable income in a year, only exceed \$1 million once. Only 4 percent of taxpayers with taxable income of at least \$1 million in each of 10-year periods always exceed \$1 million of taxable income without gains. This leaves considerable room for timing realizations, and we find that taxpayers could avoid the additional tax on up to one-third of gains simply by realizing them over several years. The actual amount avoiding extra taxation may be larger or smaller than this. On the one hand, that amount includes gains that may not be under direct control of the taxpayer. On the other hand, there are additional avoidance strategies, such as pairing realizations with charitable contributions or simply giving away assets with unrealized gains, that are not considered in this brief. Future research should consider the degree to which these would affect tax revenue collected.

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APPENDIX A

We construct a longitudinal panel of tax filers based on the masked tax identification number and tax year. Our data come from 1040, schedules, and information returns such as W-2s. We use income data from form 1040, itemized deduction information from schedule A, capital gains data from schedule D, business loss data from schedule E, and birth and death years from the Social Security master file for all returns with adjusted gross income (AGI) greater than or equal to \$1 million in 2018 inflation-adjusted dollars in any tax year from 1998 to 2021. Our sample includes 2,395,527 unique tax filers. This is a 100 percent sample of eligible filers, and it includes both timely and later filers. We assume that any missing year in the panel before death represents a tax year the filer was not required to file, and we set the tax variables to zero. We convert all income variables to 2018 price-adjusted dollars.

We validated the reported income amounts by comparing the annual number of filers with selected income sources and amounts of income by source for filers with at least \$1 million in AGI with published Internal Revenue Service data by AGI (Table 1.4-- Individual Income Tax, All Returns: Sources of Income, Adjustments, and Tax Items, by Size of Adjusted Gross Income for 2001 to 2020 and Table 1.4A. Returns with Income or Loss from Sales of Capital Assets Reported on Form 1040, Schedule D: Selected Items, by Size of Adjusted Gross Income for tax years 2012 to 2020 https://www.irs.gov/statistics/soi-tax-stats-individual-statistical-tables-by-size-of-adjusted-gross-income#_grp5). This validation confirmed the accuracy of our data extract.

Our analysis focuses on two separate definitions of long-term capital gains. First, we examine long-term capital gains as reported on schedule D line 15. Second, we examine capital gains that more closely reflect the gains from personally held assets, defined as the sum of transactions reported on Forms 8949 and lines 8a through 10 of Schedule D. We have data for the full capital gains for tax years 1998 to 2021 and the personally held gains variables for tax years 2012 to 2021.

The underlying data do not contain variables representing capital loss carryover. We create both short-term and long-term capital loss carryover using taxpayer's prior year tax return. The capital loss carryover is the loss reported on schedule D line 16 that is more negative than the \$3,000 loss limit (\$1,500 for married filing separately). We use the calculations described in the schedule D capital loss carryover worksheet to construct short-term loss carryover (schedule D line 6) and long-term loss carryover (schedule D line 14).

We make adjustments to reported capital gains as follows:

- Some filers with capital gains are not required to file Schedule D. They report capital gains directly on form 1040. In these cases, we assign the capital gains reported directly on form 1040 to long-term capital gains distributions (schedule D line 13).
- The instructions on schedule D line 21 say to enter the smaller of the amount of the loss on schedule D line 16 or \$3,000 (\$1,500 if married filing separately). Beginning in 2004, the instructions for line 21 added the statement: "Note. When figuring which amount is smaller, treat both amounts as positive numbers." In a number of cases, filers entered (\$3000) on line 21 instead of the correct smaller loss reported on schedule D line 16. This error was more prevalent in tax years before the instructions added the additional note. For filers with this type of reporting error (less than 0.1 percent of our sample), we corrected the amount reported on form 1040.
- After correcting the above issues, some filers (less than 0.1 percent of our sample) still have values reported on schedule D line 21 do not match the amount reported on form 1040. In these cases, we adjust the capital gains distribution amount (schedule D line 13) so that the values from schedule D are consistent with the amount reported on form 1040. We updated the amounts for schedule D line 15 (net long-term capital gain or loss), schedule D line 16 (combined short-term and long-term gains or loss), and schedule D line 21 (amount reported to form 1040) to include the changes we allocated to schedule D line 13.

In our simulation, we assume that all capital gains for filers with taxable income above \$1 million dollars would be subject to a higher tax rate. In our avoidance strategy, we let filers realize as much long-term capital gains as possible while keeping the taxable amount below \$1 million. If the filer has too much capital gains, the excess is stored in a notional account. In years with taxable income below \$1 million, we let the filer spend from this notional account as much as possible to keep taxable gains below \$1 million.

In the current tax treatment calculations, we use capital gains as reported on form 1040. In the “spread gains over five years” simulation, we implement the avoidance behavior, but force all filers to realize all stored gains every five years. Beginning in 2002, we force filers to realize any stored gains in 2006, 2011, 2016, and 2021. In the “spread gains over ten years” simulation, we force filers to realize any stored gains in 2011 and 2021. In the “maximum avoidance” simulation, we allow filers to retain any stored gains through the end of the simulation period. Effectively, we let them retain any stored excess gains until death. One might expect the realized gains over the five-year period in the “current tax treatment” to equal the “spread gains over five years” in each five-year period. For many filers, this is true. However, it is not the case for filers with capital losses because the capital loss carryover amount is based on prior tax year data.

For the amounts reported in table 3, we allow filers to avoid all long-term capital gains. For the amounts reported in table 4, we limit avoided capital gains to long-term gains from personally held assets. In each simulation, we recalculate realized capital gains, taxable income, capital loss carryover, and the amount of long-term gains subject to the simulated higher long-term tax rate.

APPENDIX B

In this brief we evaluate taxpayers with at least \$1 million of taxable income. However, proposals may use other definitions of income when setting that threshold. Here we provide tables similar to those in the body of the paper, but using \$1 million of adjusted gross income, rather than taxable income.

TABLE B1

Persistence of High-Income Taxpayers, 2002–2011 and 2012–2021

Number of years that tax units have at least \$1 million in AGI with and without long-term capital gains (2018 price-adjusted dollars)

Number of years	AGI, 2002 to 2011		AGI, 2012 to 2021	
	including LTCG (a)	excluding LTCG (b)	including LTCG (c)	excluding LTCG (d)
1	407,440	268,452	364,959	259,319
2	148,344	116,755	187,211	147,361
3	90,628	75,336	107,124	89,346
4	66,271	56,065	77,387	66,390
5	54,086	46,082	60,667	52,784
6	46,173	38,905	49,966	43,788
7	36,878	31,824	43,967	38,192
8	30,084	26,163	40,675	34,904
9	26,990	23,708	42,566	35,812
10	45,789	39,177	71,760	56,648
Total	952,683	722,467	1,046,282	824,544

Source: Authors' tabulations of IRS data.

Notes: Sample includes all tax filers ages 20 to 60 at the beginning of the period who ever had AGI including capital gains over \$1 million (2018 price-adjusted dollars).

AGI = Adjusted gross income. LTCG = long-term capital gains.

(a, c) AGI including capital gains is the AGI as reported on form 1040.

(b, d) AGI excluding all long-term capital gains (positive sum of schedule D lines 8a, 8b, 9, 10, 11, 12, 13, (14)).

TABLE B2

Taxpayers who ever had more than \$1 million in AGI, 1999–2021
2018 price-adjusted dollars

Year	Tax units with AGI including gains over \$1 million (number) (a)	Tax units with AGI excluding long-term gains over \$1 million (number) (b)	Tax units who are millionaires because of long-term capital gains (percent) (c)	Amount of net long-term capital gains potentially subject to the tax (\$ millions) (d)	Tax units with AGI excluding gains from personally held assets over \$1 million (number) (e)	Tax units who are millionaires because of capital gains from personally held assets (percent) (f)
1999	350,419	254,412	27.4	303,336		
2000	410,346	286,667	30.1	398,738		
2001	316,957	251,555	20.6	185,389		
2002	279,985	230,556	17.7	141,669		
2003	295,988	236,439	20.1	165,180		
2004	368,140	274,985	25.3	278,806		
2005	434,925	316,313	27.3	378,999		
2006	481,382	348,843	27.5	446,344		
2007	513,525	371,015	27.8	501,087		
2008	387,086	313,738	18.9	232,393		
2009	301,080	267,487	11.2	117,264		
2010	345,142	295,549	14.4	220,285		
2011	355,946	300,756	15.5	229,147		
2012	441,745	355,465	19.5	406,851		
2013	385,376	321,549	16.6	235,191	354,610	8.0
2014	450,022	357,736	20.5	375,547	408,631	9.2
2015	471,928	375,413	20.5	378,581	432,078	8.4
2016	458,068	372,350	18.7	331,180	424,116	7.4
2017	501,759	393,084	21.7	434,083	454,607	9.4
2018	532,773	408,074	23.4	462,520	478,472	10.2
2019	537,456	423,294	21.2	434,144	489,216	9.0
2020	582,011	449,832	22.7	547,631	516,076	11.3
2021	554,571	421,408	24.0	846,533	493,822	11.0

Source: Authors' tabulations of IRS data.

Notes: Sample includes all tax units who ever had AGI including capital gains over \$1 million (2018 price-adjusted dollars) in any year from 1999 to 2021.

Filers who report capital gains without filing a Schedule D have gains reported on form 1040 assigned to capital gains distributions reported on Schedule D line 13.

(a) taxable income including capital gains is the taxable income as reported on form 1040 in 2018-price-adjusted dollars.

(b) taxable income excluding all long-term capital gains (positive amounts reported on Schedule D line 15) in 2018 price-adjusted dollars.

(c) Percentage of tax units with taxable income excluding capital gains (schedule D line 15) under \$1 million and taxable income including capital gains over \$1 millions.

(d) Gains subject to the tax is the amount of capital gains included on Schedule D line 15 subject to the millionaire tax. This is the lesser of taxable income over \$1 million or the amount of capital gains reported Schedule D line 15.

(e) taxable income excluding gains on personally held assets (positive sum schedule D line 8a+8b+9+10).

(f) Percentage of tax units with taxable income excluding gains on personally held assets under \$1 million and taxable income including capital gains over \$1 millions.

TABLE B3

Taxpayers Who Ever Had \$1 Million in AGI
and Various Long-Term Capital Gains Avoidance Strategies, By Time Period
Millions of 2018 price-adjusted dollars

Period	Capital gains included in AGI	AGI over \$1 million	Gains subject to the millionaire tax	Change from baseline			Percent change from baseline		
				Capital gains included in AGI	AGI over \$1 million	Gains subject to the millionaire tax	Capital gains included in AGI	AGI over \$1 million	Gains subject to the millionaire tax
Current tax treatment^a									
2002–2011	3,953,665	7,814,930	2,711,175						
2012–2021	6,114,442	11,672,040	4,452,262						
2002–2021	10,068,108	19,486,971	7,163,437						
Spread gains over 5 years^b									
2002–2011	3,857,461	7,376,921	2,263,564	-96,205	-438,009	-447,610	-2.4	-5.6	-16.5
2012–2021	6,053,639	11,263,208	4,037,884	-60,803	-408,832	-414,378	-1.0	-3.5	-9.3
2002–2021	9,911,100	18,640,129	6,301,448	-157,008	-846,842	-861,988	-1.6	-4.3	-12.0
Spread the gains over 10 years^c									
2002–2011	3,736,745	6,937,347	1,819,604	-216,920	-877,583	-891,570	-5.5	-11.2	-32.9
2012–2021	5,970,401	10,993,946	3,766,642	-144,041	-678,094	-685,620	-2.4	-5.8	-15.4
2002–2021	9,707,146	17,931,294	5,586,246	-360,962	-1,555,677	-1,577,191	-3.6	-8.0	-22.0
Maximum avoidance^d									
2002–2011	1,900,323	5,117,526	0	-2,053,343	-2,697,404	-2,711,175	-51.9	-34.5	-100.0
2012–2021	2,531,583	7,229,262	0	-3,582,859	-4,442,778	-4,452,262	-58.6	-38.1	-100.0
2002–2021	4,431,906	7,229,262	0	-5,636,202	-12,257,709	-7,163,437	-56.0	-62.9	-100.0

Source: Authors' tabulations of IRS data.

Notes: Sample includes all tax filers who ever had over \$1 million in AGI in any year from 1998 to 2021.

All amounts are in millions of 2018 price-adjusted dollars.

(a) Current tax treatment are amounts reported on form 1040 and Schedule D.

(b) Spread gains over 5 years simulation allows tax payers to shift the timing of long-term capital gains over a 5-year period to reduce the amount of capital gains subject to a millionaire tax.

(c) Spread gains over 10 years simulation allows tax payers to shift the timing of long-term capital gains over a 10-year period to reduce the amount of capital gains subject to a millionaire tax.

(d) Maximum avoidance simulation allows tax payers to shift the timing of capital gains realizations to avoid a millionaire tax. Tax payers can retain capital gains until death.

Filer avoidance behavior is limited to all long-term capital gains (sum of schedule D line 8a, 8b, 9, 10, 11, 12, 13) minus capital loss carryover (line 14).

TABLE B4

Taxpayers Who Ever Had \$1 Million in AGI,
by Various Personal Long-Term Capital Gains Avoidance Strategies
Millions of 2018 price-adjusted dollars

Period	Capital gains included in AGI	AGI over \$1 million	Gains subject to the millionaire tax	Change from baseline			Percent change from baseline		
				Capital gains included in AGI	AGI over \$1 million	Gains subject to the millionaire tax	Capital gains included in AGI	AGI over \$1 million	Gains subject to the millionaire tax
Current tax treatment^a									
2012–2021	6,114,442	11,672,040	4,452,262						
Spread gains over 5 years^b									
2012–2021	6,176,000	11,561,938	4,345,079	61,558	-110,102	-107,183	1.0	0.9	-2.4
Spread the gains over 10 years^c									
2012–2021	6,137,559	11,449,403	4,231,862	23,117	-222,638	-220,400	0.4	-1.9	-5.0
Maximum avoidance^d									
2012–2021	4,852,744	10,169,949	2,953,126	-1,261,698	-1,502,091	-1,499,136	-20.6	-12.9	-33.7

Source: Authors' tabulations of IRS data.

Notes: Sample includes all tax filers who ever had over \$1 million in AGI in any year from 1998 to 2021.

All amounts are in millions of 2018 price-adjusted dollars.

AGI = Adjusted gross income.

(a) Current tax treatment are amounts reported on form 1040 and Schedule D.

(b) Spread gains over 5 years simulation allows tax payers to shift the timing of long-term capital gains over a 5-year period to reduce the amount of capital gains subject to a millionaire tax.

(c) Spread gains over 10 years simulation allows tax payers to shift the timing of long-term capital gains over a 10-year period to reduce the amount of capital gains subject to a millionaire tax.

(d) Maximum avoidance simulation allows tax payers to shift the timing of capital gains realizations to avoid a millionaire tax. Tax payers can retain capital gains until death.

Filer avoidance behavior is limited to personal long-term capital gains (sum of schedule D line 8a, 8b, 9, 10).

Capital gains included in AGI is the sum of short-term and long-term capital gains including the capital loss carryover and subject to a -\$3,000 loss cap.

Gains subject to the millionaire tax is the lesser of AGI over \$1 million or capital gains included in AGI.

APPENDIX C

Although we do not provide a detailed analysis of how itemized charitable deductions can be used to offset realizations of capital gains, we provide the following tables. These tables show that gains and contributions are related, and that there is some ability to offset gains with itemized contributions. However, gains typically exceed contributions for most taxpayers, so there would only be a partial offset.

Table C1 describes the persistence of various levels of giving by those who itemized their returns and reported charitable contributions and had at least \$1 million in taxable income. About 553,000, or 23 percent, never provided as much as one percent of their AGI from 2002 through 2011, while about 77 percent did for at least one year. But just over 2 million, or 87 percent, never gave at least 20 percent, and only 13 percent did at least once. The period from 2012 to 2021 follows a similar pattern. Table C2 reports the share of filers each year that report contributions of various amounts, written as shares of AGI. Between 33 percent and 43 percent gave at least 1 percent of AGI, while between 10 and 13 percent gave away 5 percent or more. In any year about 1 percent gave away at least 30 percent of their income. Tables C3 and C4 describe the number and share of taxpayers in 2017 that make contributions, measured as a share of the long-term capital gains they realized. Of those realizing less than \$10,000 in capital gains, nearly three-quarters made contributions that exceeded their gains, but only 2 to 3 percent made contributions between 80 percent and 100 percent. Of those with gains between \$10,000 and \$20,000, nearly half made contributions greater than their gains. But of those with at least \$100,000 in gains, only about 5 percent made contributions exceeding their gains.

TABLE C1

Number of Years Tax Filers Reported Charitable Contributions by Percent of AGI

Number of years	2002 to 2011				2012 to 2022			
	Reported giving as a percent of AGI				Reported giving as a percent of AGI			
	≥ 1%	≥ 5%	≥ 10%	≥ 20%	≥ 1%	≥ 5%	≥ 10%	≥ 20%
0	553,226	1,461,390	1,812,621	2,064,933	722,213	1,480,296	1,790,690	2,037,985
1	226,497	272,278	217,695	156,149	244,562	270,267	227,867	165,822
2	176,943	149,115	104,386	63,371	180,356	144,782	106,606	66,867
3	157,953	103,671	66,660	35,041	155,285	99,996	67,020	37,475
4	148,755	79,789	47,264	22,139	144,289	77,157	48,109	24,014
5	142,164	64,095	34,651	14,397	147,870	63,933	36,975	16,578
6	138,005	53,041	27,503	10,022	173,682	57,810	29,793	12,097
7	138,997	46,755	21,911	6,823	130,697	48,055	23,646	8,504
8	148,929	43,719	18,305	5,097	125,705	43,443	19,646	6,387
9	188,685	46,395	16,815	4,055	137,910	44,058	17,516	5,376
10	366,245	66,151	18,588	4,372	223,830	56,602	18,531	5,294
All	2,386,399	2,386,399	2,386,399	2,386,399	2,386,399	2,386,399	2,386,399	2,386,399

Source: Authors' tabulations of IRS data.

Notes: Sample is limited to tax filers who had AGI over \$1 million (2018 price-adjusted dollars) in any year 1998 to 2021. AGI = adjusted gross income.

TABLE C2

Distribution of Charitable Giving as a Percent of AGI by Year

Tax Year	Number of filers	Reported giving as a percent of AGI (%)				
		≥ 1%	≥ 5%	≥ 10%	≥ 20%	≥ 30%
1999	298,312	38.2	11.2	5.8	2.7	1.3
2000	351,377	36.8	10.6	5.3	2.4	1.3
2001	262,433	41.4	11.3	5.6	2.5	1.3
2002	231,040	42.7	11.7	5.6	2.5	1.4
2003	247,065	43.1	12.3	6.0	2.6	1.4
2004	311,988	42.4	12.1	5.9	2.5	1.4
2005	369,047	42.2	11.9	5.6	2.3	1.2
2006	403,966	40.5	11.2	5.3	2.1	1.1
2007	430,584	40.1	11.1	5.1	2.0	1.1
2008	310,202	39.0	10.0	4.3	1.7	0.9
2009	236,467	41.9	10.8	4.8	1.8	0.9
2010	271,439	41.4	11.2	5.0	1.9	1.0
2011	280,218	41.3	11.2	5.0	1.9	1.0
2012	360,182	39.9	11.2	5.1	2.0	1.0
2013	318,350	41.3	11.8	5.4	2.1	1.1
2014	379,781	40.2	11.7	5.5	2.2	1.2
2015	395,743	39.6	11.4	5.3	2.2	1.2
2016	380,064	41.1	12.8	6.2	2.7	1.5
2017	415,395	40.7	12.8	6.2	2.7	1.5
2018	463,382	37.9	11.7	5.8	2.6	1.5
2019	467,400	37.5	12.0	5.9	2.6	1.5
2020	513,497	33.3	10.6	5.1	2.2	1.2

Source: Authors' tabulations of IRS data.

Notes: Sample is limited to tax filers who had AGI over \$1 million (2018 price-adjusted dollars) in any year 1998 to 2021.

TABLE C3

Capital Gains Among Tax Units with AGI > \$1 Million and Positive Long-Term Capital Gains, 2017

Annual long-term capital gains (Millions of 2018 price-adjusted dollars)

	0	00 ≤ 10%	10 ≤ 20%	20 ≤ 40%	40 ≤ 60%	60 ≤ 80%	80 ≤ 100%	100%+	All
0 ≤ 10,000	6,793	1,139	1,153	1,954	1,756	1,528	1,400	41,542	57,265
10,000 ≤ 20,000	2,320	1,757	1,518	2,439	2,001	1,462	1,151	10,585	23,233
20,000 ≤ 40,000	2,778	4,097	2,936	4,081	2,612	2,029	1,373	9,456	29,362
40,000 ≤ 60,000	1,761	3,766	2,538	3,035	1,744	1,216	831	4,537	19,428
60,000 ≤ 80,000	1,266	3,789	2,095	2,273	1,298	820	548	2,736	14,825
80,000 ≤ 100,000	917	3,228	1,681	1,715	899	543	373	1,819	11,175
100,000 +	23,481	121,009	20,631	16,930	8,285	4,664	2,816	10,242	208,058
All	39,316	138,785	32,552	32,427	18,595	12,262	8,492	80,917	363,346

Source: Authors' tabulations of IRS data.

Notes: AGI = adjusted gross income.

Sample is limited to tax filers who had AGI over \$1 million (2018 price-adjusted dollars) and positive long-term gains in current tax year. Long-term capital gains and charitable contributions are in 2018 price-adjusted dollars.

TABLE C4

Number of Tax Units with Capital Gains by Ratio of Charitable Giving

Share of tax units with capital gains (%)^a

	0	00 ≤ 10%	10 ≤ 20%	20 ≤ 40%	40 ≤ 60%	60 ≤ 80%	80 ≤ 100%	100%+	All
0 ≤ 10,000	11.9	2.0	2.0	3.4	3.1	2.7	2.4	72.5	100.0
10,000 ≤ 20,000	10.0	7.6	6.5	10.5	8.6	6.3	5.0	45.6	100.0
20,000 ≤ 40,000	9.5	14.0	10.0	13.9	8.9	6.9	4.7	32.2	100.0
40,000 ≤ 60,000	9.1	19.4	13.1	15.6	9.0	6.3	4.3	23.4	100.0
60,000 ≤ 80,000	8.5	25.6	14.1	15.3	8.8	5.5	3.7	18.5	100.0
80,000 ≤ 100,000	8.2	28.9	15.0	15.3	8.0	4.9	3.3	16.3	100.0
100,000 +	11.3	58.2	9.9	8.1	4.0	2.2	1.4	4.9	100.0
All	10.8	38.2	9.0	8.9	5.1	3.4	2.3	22.3	100.0

Source: Authors' tabulations of IRS data.

Notes: AGI = adjusted gross income.

(a) By ratio of charitable giving/capital gains among tax units with AGI > \$1million and positive long-term capital gains.

Sample is limited to tax filers who had AGI over \$1 million (2018 price-adjusted dollars) and positive long-term gains in current tax year. Long-term capital gains and charitable contributions are in 2018 price-adjusted dollars.