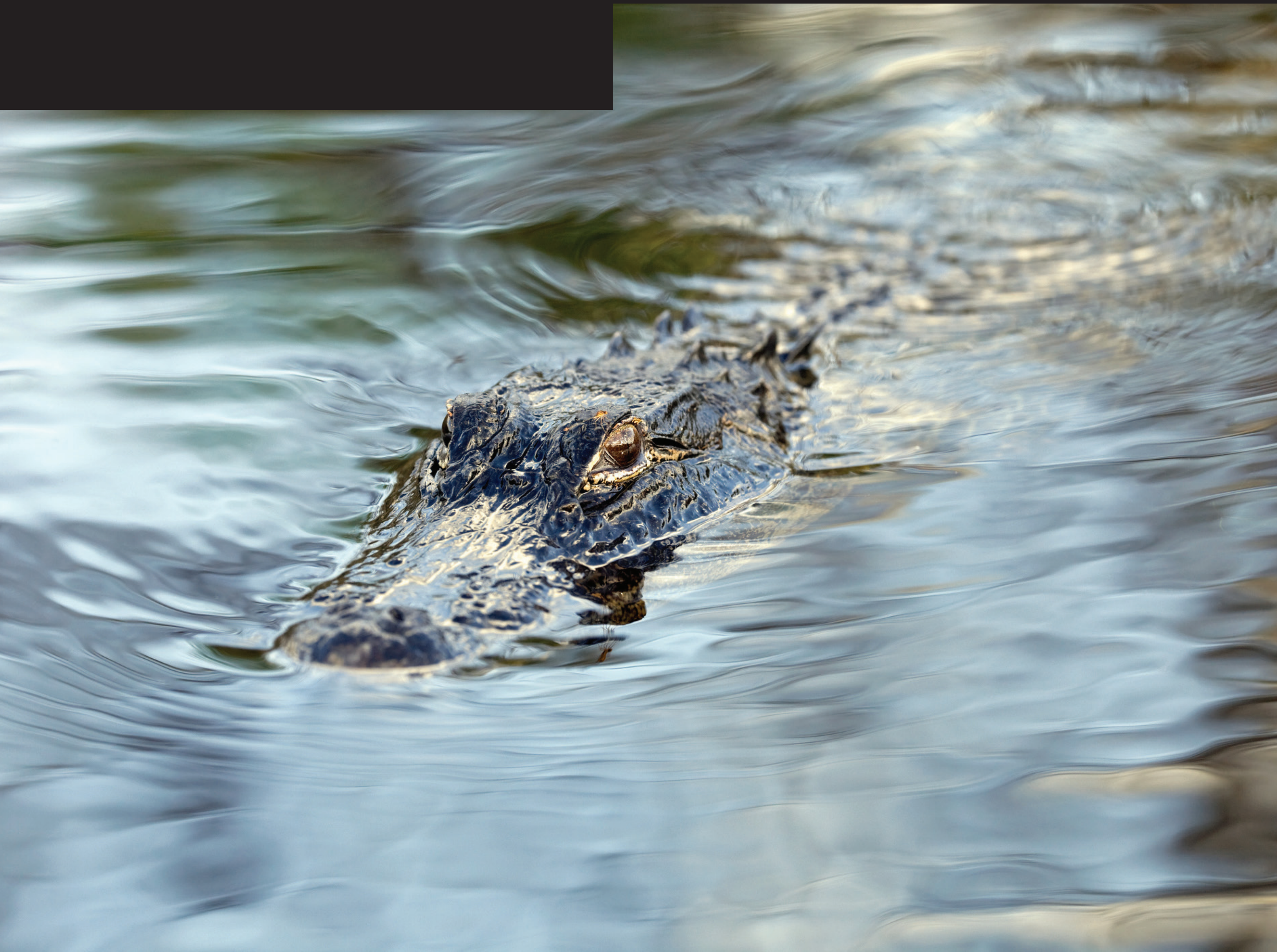
BERNSTEIN

2019

THE HIDDEN COST OF MARKET TIMING



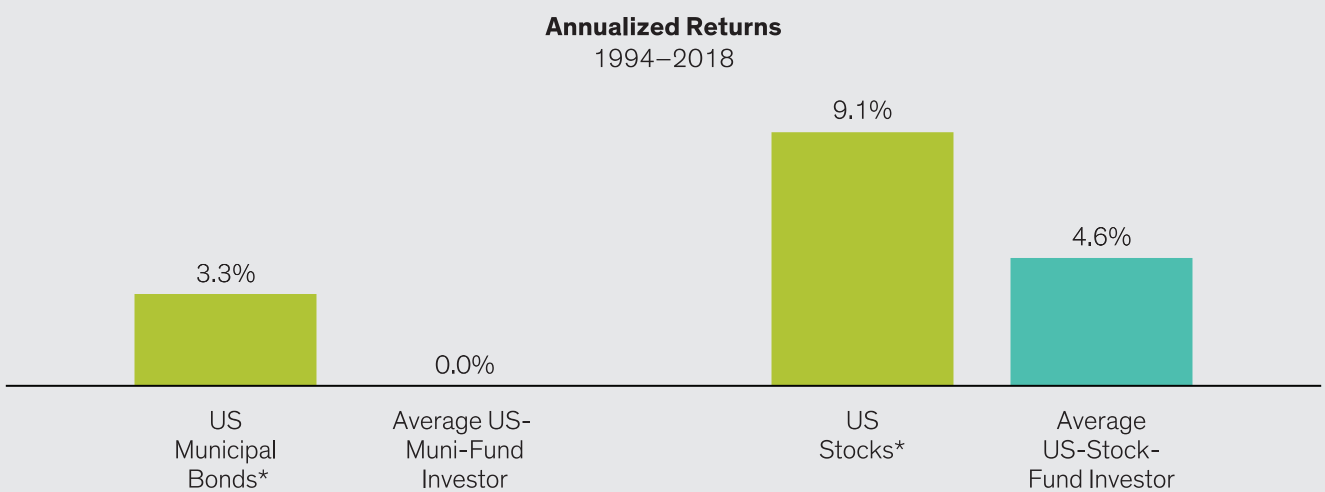
Market timing is hard. History suggests that investors who attempt to time the market usually end up with lower returns compared to those who stay the course (*Display 1*). But taxable investors face an even steeper uphill climb. That's because exiting the market usually triggers a tax bill—an often insurmountable hurdle for those seeking to outperform a buy-and-hold strategy over time.

Settling a tax bill as you retreat from equities almost always means that you need the market to go down once you've exited. Why? Because you must reenter at a lower point if you hope to outperform those who held on. Your tax hit remains certain. But whether the market will drop sufficiently—and whether you'll ultimately reenter at a low enough level—is not. If the market doesn't cooperate, or you lose your nerve, you'll fall behind.

Exiting the market also means forgoing the opportunity to strategically harvest losses in the event of further market declines. That's unfortunate because loss harvesting provides a powerful boost to after-tax returns.

When bad news seems to come in waves, it's tempting to look elsewhere for a safe place to park your portfolio. While it's natural to fear losses, a thorough planning process represents the best antidote. Planning reinforces your time horizon, while explicitly aligning your asset allocation and objectives. Even better, it reassures you that your portfolio can withstand a significant market downturn while maintaining a very high likelihood of achieving your long-term goals.

DISPLAY 1: TREND FOLLOWING CAN BE HAZARDOUS TO YOUR WEALTH



Past performance is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized.

An investor cannot invest in an index. Index figures do not reflect the deduction of management fees and other expenses an investor would incur when investing in a fund or separately managed portfolio.

*US municipal bonds are represented by the Lipper Short/Intermediate Blended Municipal Fund Average; US stocks, by the S&P 500. The average US-stock-fund investor captures investors in US-registered stock funds, which may include funds that invest in whole or in part in non-US stocks.

There can be no assurance that working with a financial advisor will improve investment results. Investors cannot invest directly in indices. The results for the average US-muni-fund and US-stock-fund investors are in the Dalbar study "Quantitative Analysis of Investor Behavior" (QAIB), 2019. QAIB calculates investor returns as the change in mutual fund assets after excluding sales, redemptions, and exchanges. This method of calculation captures realized and unrealized capital gains, dividends, interest, trading costs, sales charges, fees, expenses, and any other costs, annualized over the period.

Source: Dalbar, Lipper, S&P, and AB

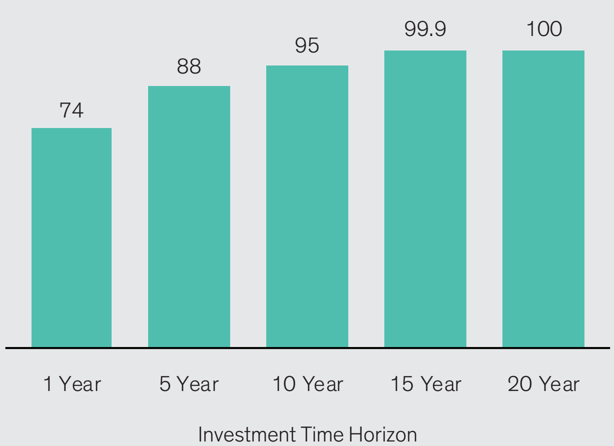
OVERCOMING YOUR INSTINCTS

Most equity investors intuitively understand that longer time horizons tend to produce more favorable outcomes. Over the last century, the US stock market has gone up 100% of the time during rolling 20-year periods, compared to just three-quarters of the time in rolling one-year periods (*Display 2*).

Yet some investors seek to outperform, especially in the short term, by trying to time the market. In theory, it's possible—provided you can precisely pinpoint when and by how much the market will decline, and when prices have sufficiently dropped to warrant reentry. You'll need correct predictions on both points. You'll also need a deep well of discipline to reinvest once stocks have been battered and bruised.

In practice, market timing is rarely so dispassionate. Instead, investors usually turn to it in the grips of strong emotions and heightened anxiety (***see sidebar)***. In the heat of the moment, it's nearly impossible to carefully analyze the situation with an eye toward some distant potential impact on your future self. But a measured exploration of the math behind market timing—when you're not facing a looming market downturn—may help.

DISPLAY 2: POSITIVE RETURN (PERCENT)
S&P 500 ROLLING PERIODS 1928–2018



Past performance is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized.
An investor cannot invest in an index. Index figures do not reflect the deduction of management fees and other expenses an investor would incur when investing in a fund or separately managed portfolio.
Source: Schiller Online Data Set

WHY ATTEMPT MARKET TIMING?

We've all had that feeling. A powerful intuition that the stock market appears poised for a pullback and we should shift our equities to the perceived safety of cash and bonds. Put simply, we are afraid that if we fail to act, we won't have enough money to reach our financial goals. Yet, trying to dip in and out of markets, avoiding losses and returning in time to ride the wave, rarely works. So why do investors persist?

- They overestimate their ability to predict market movements
- They lose sight of their time horizon, and
- They forget about taxes

OVERCONFIDENCE

What makes us so sure that the market is heading for a fall? Protecting our wealth may tap into the primal parts of the brain governing risk aversion. This innate "fight-or-flight" mentality served our ancestors well on the savannah, but the same instinct for survival can lead to overreactions when it comes to stock market volatility.

TIME HORIZON

Selling to avoid the pain of a potential decline often reflects our "present bias"—a tendency to favor short-term well-being at the expense of long-term security. Our present self feels unsettled. While we might objectively recognize the need for stocks' higher long-term growth potential, the immediate impulse to ease our fears takes over. In most of these pitted battles, our present self usually wins out!

TAXES

Taxes—if they're even considered—are usually seen as a small price to pay to avoid an approaching downturn. But they cannot be ignored. When taxable investors leave the market, their tax bill reduces the amount of wealth available for subsequent reinvestment—making it harder to outperform in the long run. Plus, if the market does decline, savvy taxable investors will be reducing their taxes via loss harvesting (just as you've increased yours).

SHOULD YOU STAY…OR GO?

Imagine that the market has soared, but you're increasingly worried that a large pullback looms. Should you sell your stocks? That depends. To prevent your future self from regretting the decision, consider the following questions:

- What is your true investment horizon? In other words, when do you really need the money?
- What is the tax impact of exiting the market today?
- Where will you invest after leaving equities?
- Under what circumstances will you wade back in?

Let's explore each in turn.

> Should you sell your stocks? That depends.

WHAT IS YOUR TRUE INVESTMENT HORIZON?

If you need the money soon (e.g., within the next year or two), you might consider liquidating to avoid a potential downturn. On the other hand, if you won't need the funds for several more years, the market could surge even higher. Despite periodic pullbacks, stocks have historically traced an upward path over time. Above all, be honest. "Real" market timing occurs when your actual time horizon is long, but you convince yourself—despite evidence to the contrary—that you are wise to leave the market now.

Many investors prove quite adept at arguing (to themselves, and their financial advisors) that their investment horizon is short (thereby recasting the decision to exit as prudent rather than rash). For example, many recently retired investors assert that their time horizon has suddenly compressed—and they can no longer "afford" to endure another decline. In fact, they're likelier to remain at least partially invested for another 20 to 30 years. Adopting a rigorous planning approach with your financial advisor can help you embrace your true investment horizon.

WHAT IS THE TAX IMPACT OF EXITING THE MARKET TODAY?

Taxable investors invariably face tax consequences upon selling as previously unrealized gains come due. Think of it as the inherent cost of selling. To recoup, investors must earn higher returns than they otherwise would have—and that requires reentering the market below where you've exited. There's also a subtle opportunity cost: if the market drops after you've retreated, you forego loss harvesting opportunities enjoyed by other taxable investors.

WHERE WILL YOU INVEST AFTER LEAVING EQUITIES?

Market timing usually involves investing, at least temporarily, in asset classes with lower long-term return expectations—such as cash or bonds. But few investors can afford to earn meager returns indefinitely. For that reason, those who abandon stocks must ultimately settle on a reentry point (preferably a lower one).

UNDER WHAT CIRCUMSTANCES WILL YOU WADE BACK IN?

If the prospect for equities concerns you now, how will you feel when the outlook seems even bleaker? Likely worse. That's why most investors wait until prices rise above their exit point before reinitiating equity exposure. Few investors have the fortitude to embrace stocks amid market turmoil, which explains why market timing usually harms your future self.

And what if stocks keep going up? Admitting defeat is hard. If you find current valuations unsettling, how will you manage to reinvest when they're even higher? Many investors will initially hold out, but the likelihood of outperforming a buy-and-hold strategy declines as the market moves higher. That's because the magnitude of the market correction you're counting on grows larger—and more remote. Eventually, investors watching the market take off tend to reinvest their proceeds (minus the taxes incurred) at higher prices. They are forced to cut their losses and accept that their timing strategy has proven detrimental.

This brings us to the math: how much lower do you need the market to fall before you'll beat staying invested?

BY HOW MUCH DO YOU NEED THE MARKET TO FALL?

To tackle this question, we need to reframe what the taxes due on unrealized gains really represent: an interest-free loan from the IRS. When you pull forward the realization of those gains by liquidating stocks, you forgo the compounding effect of an attractive loan.

Consider a $1 million portfolio with $500K of unrealized gains (a 100% gain portfolio) faced with a 30% total capital gains tax rate (the sum of federal and state taxes). Realizing those gains today would generate a $150K tax hit, or 15% of the market value of the portfolio. This means 15% less money earning returns for you in the future. If you don't realize those gains, the money you ultimately owe federal and state governments will continue earning returns for you.

Returning to our question, we must pinpoint the market level below which you need to reenter to precisely offset accelerating your capital gains taxes upon exiting. To do so, we compare your after-tax wealth from staying invested over the next 10 years, and then liquidating your portfolio (option 1), to your after-tax wealth from exiting the market now—paying taxes and investing the proceeds at a lower market level—then liquidating 10 years hence (option 2).

Assume that:

- Your portfolio consists of varying degrees of unrealized capital gains (see table)
- Your capital gains tax rate is 30%
- You quickly reenter (so that we can ignore returns on cash and bonds)
- Stocks generate a range of expected returns over the next 10 years

Armed with these assumptions, we can quickly estimate how much lower your reentry point must be to protect your future self (*Display 3*). For instance, if the positions in your portfolio are up 50%, on average, from your purchase price—and equities deliver a 6% compound annual return over the next 10 years—you would need to reenter at a point nearly 9% lower for a market timing strategy to outperform.

DISPLAY 3: MARKET DECLINES FOR REENTRY TO PROTECT YOUR FUTURE SELF

	Mkt: CAGR over Next 10 Years			
Gain % of Cost	**5.0%**	**6.0%**	**7.0%**	**8.0%**
10	(1.8)	(2.2)	(2.7)	(3.2)
20	(3.3)	(4.2)	(5.1)	(6.1)
30	(4.7)	(5.9)	(7.2)	(8.6)
50	(7.0)	(8.8)	(10.7)	(12.9)
100	(11.1)	(14.0)	(17.1)	(20.5)
200	(15.7)	(19.8)	(24.2)	(29.0)

> When you pull forward the realization of gains, you forgo compounding on an attractive loan

These assumed 10-year market CAGRs range from modest to about average for equity markets over time. Here we show them as cumulative returns.

	Market Returns over Next 10 Years			
CAGR (%)	5.0	6.0	7.0	8.0
Cumulative Return (%)	63	79	97	116

While the requisite market declines may not seem onerous, two conclusions emerge with respect to reentry:

- The larger the current unrealized gains, the greater the decline required
- The stronger the subsequent market returns, the greater the decline required

If your time horizon exceeds 10 years you will need an even lower reentry point (assuming stocks deliver similar returns beyond the 10-year mark). Yet in all cases, the correlation between strong subsequent market returns and steeper market declines presents a singular challenge: the inability to predict future returns—at either the time of exit or reentry. In other words, you could retreat from equities just before a precipitous drop and reinvest at a level that seems to provide an ample cushion for outperformance, yet still lag because you underestimated the strength of subsequent market returns.

LOST OPPORTUNITY TO HARVEST LOSSES

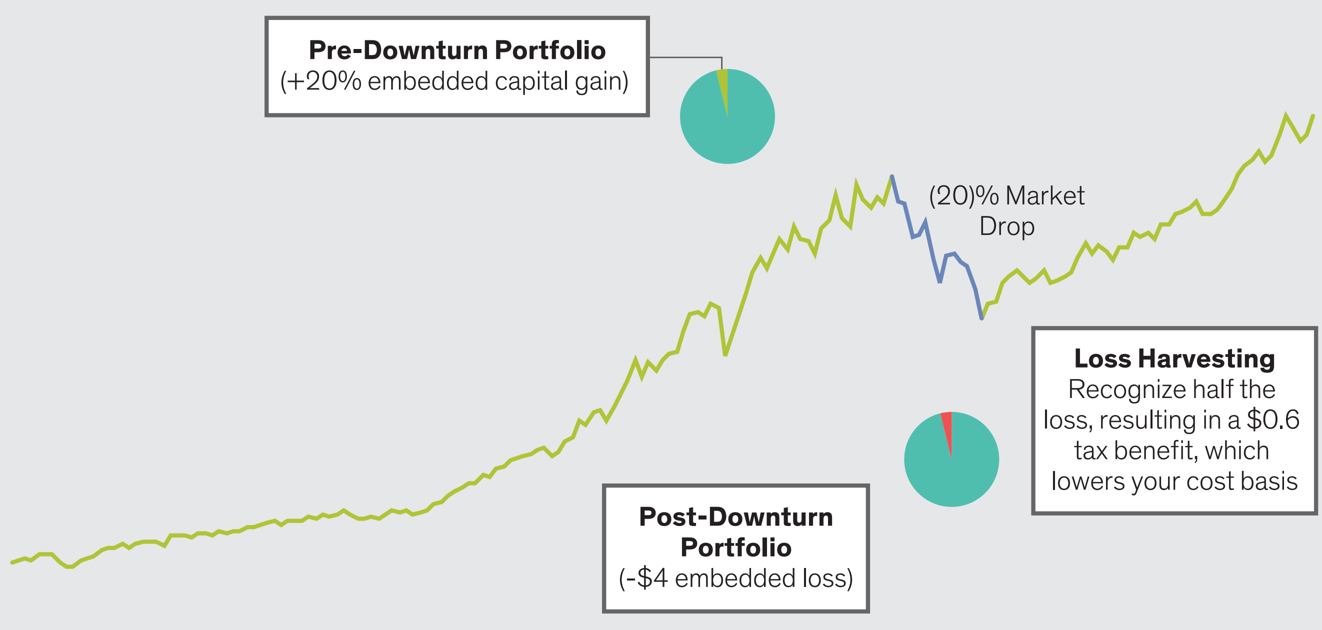
So far, we have not addressed when unrealized gains would be realized in the normal course of managing a portfolio. Instead, we've assumed that capital gains are only triggered today (when you exit the market) and/or in 10 years (when you need the money). While such a binary approach makes sense for an equity index fund or ETF, actively managed equity portfolios typically realize some intervening gains. This blunts the impact of accelerating realized gains in the wake of a hasty retreat—at least when compared to selling an equity index fund or ETF. For that reason, less of a market downturn is likely required than the figures in our simple illustration.

On the other hand, actively managed portfolios can also secure a tax benefit by intentionally recognizing losses as the market falls. A premature exit means missing the chance to take advantage of such loss harvesting and incurring an additional opportunity cost—one that can be very steep.

DIMENSIONING THE OPPORTUNITY COST

Forgoing the benefit of loss harvesting fundamentally alters the calculation of your "self-protective" reentry point. To recalculate, we must make assumptions about how far the market falls, the proportion of portfolio losses that are harvested, and the deployment of the resulting tax benefits.

DISPLAY 4: PATH OF A BUY-AND-HOLD, LOSS-HARVESTING INVESTOR



For illustrative purposes only.
Source: AB

Sticking with our basic math and the same six portfolios we previously considered, assume:

- Market declines of 20% and 40%
- Active investors harvest half the available losses
- These losses produce tax benefits (by offsetting other gains, which reduces your capital gains tax bill) at an effective tax rate of 30%
- These tax benefits are then reinvested in their stock portfolios

The first set of tables shows what happens to our six starting portfolios after a 20% market decline, followed by loss harvesting and reinvestment of the tax benefits. Take the portfolio with a 20% embedded capital gain. After a 20% market decline, the unrealized gain has been pared back to a loss of -4 and the portfolio's market value drops from 100 to 96. Realizing half of that loss yields a tax benefit of 0.6.

With this information, we can calculate the new cost basis for each portfolio. We do so by recognizing the loss that occurred when selling—which reduces your cost basis—and offsetting it by the tax benefit (100-2+0.6=98.6). Note that the market value of the portfolio also increases by the amount of the reinvested tax benefit (96+0.6=96.6).

The same process plays out in our six starting portfolios after a 40% market decline, followed by loss harvesting and reinvestment of the tax benefits.

From these new starting points, we assume the portfolios rebound according to our original 10-year return forecasts for the full period (i.e., from before the 20% and 40% market declines). Ranging between 104% and 260%, these rebounds end up exceeding the cumulative returns for the initial 10-year forecasts because the market has drifted 20% or 40% lower. This provides a baseline for the trajectory of an investor who remained invested and took full advantage of loss harvesting (*Display 4, previous page*).

DISPLAY 5

Six Potential Starting Points

Cost ($)	Unrealized G/L ($)	Mkt ($)
100	10	110
100	20	120
100	30	130
100	50	150
100	100	200
100	200	300

After Market Decline = 20%

Cost ($)	Unrealized G/L ($)	Mkt ($)
100	(12)	88
100	(4)	96
100	4	104
100	20	120
100	60	160
100	140	240

Assume 50% of Losses Realized

Loss Taken ($)	Tax Benefit ($)
(6)	1.8
(2)	0.6
0	0
0	0
0	0
0	0

Six New Portfolios (After Adding in Tax Benefits)

Cost ($)	Gain ($)	Mkt ($)
95.8	(6)	89.8
98.6	(2)	96.6
100	4	104
100	20	120
100	60	160
100	140	240

DISPLAY 6

Six Potential Starting Points		
Cost ($)	**Unrealized G/L ($)**	**Mkt ($)**
100	10	110
100	20	120
100	30	130
100	50	150
100	100	200
100	200	300

After Market Decline = 40%		
Cost ($)	**Unrealized G/L ($)**	**Mkt ($)**
100	(34)	66
100	(28)	72
100	(22)	78
100	(10)	90
100	20	120
100	80	180

Assume 50% of Losses Realized	
Loss Taken ($)	**Tax Benefit ($)**
(17)	5.1
(14)	4.2
(11)	3.3
(5)	1.5
0	0
0	0

The New Portfolio (After Adding in Tax Benefit)		
Cost ($)	**Gain ($)**	**Mkt ($)**
88.1	(17)	71.1
90.2	(14)	76.2
92.3	(11)	81.3
96.5	(5)	91.5
100	20	120
100	80	180

HOW MUCH LOWER FOR REENTRY?

What about an investor who exits the market before these pullbacks? How much of a retrenchment must that investor endure before reentering if they're to match the returns of our buy-and-hold, loss-harvesting investor?

The shading indicates the market reentry discounts that changed from *Display 3*. A 20% market decline only creates loss harvesting opportunities if a starting portfolio has modest unrealized gains, so the minimum market pullback the market timer requires has risen. The same 20% drop fails to generate losses for portfolios with 30%, 50%, or 100% unrealized gains prior to the downturn. Since there are no forgone loss harvesting opportunities in these cases, the minimum market decline for reentry remains unchanged.

DISPLAY 7

	Market Declines 20% Mkt: CAGR over Next 10 Years			
Gain % of Cost	**5.0%**	**6.0%**	**7.0%**	**8.0%**
10	(3.5)	(4.3)	(5.2)	(6.1)
20	(3.9)	(4.8)	(5.9)	(7.0)
30	(4.7)	(5.9)	(7.2)	(8.6)
50	(7.0)	(8.8)	(10.7)	(12.9)
100	(11.1)	(14.0)	(17.1)	(20.5)
200	(15.7)	(19.8)	(24.2)	(29.0)

	Market Declines 40% Mkt: CAGR over Next 10 Years			
Gain % of Cost	**5.0%**	**6.0%**	**7.0%**	**8.0%**
10	(9.9)	(11.7)	(13.6)	(15.6)
20	(9.6)	(11.5)	(13.5)	(15.7)
30	(9.4)	(11.3)	(13.4)	(15.7)
50	(8.9)	(11.0)	(13.3)	(15.8)
100	(11.1)	(14.0)	(17.1)	(20.5)
200	(15.7)	(19.8)	(24.2)	(29.0)

However, a 40% pullback will create larger losses in portfolios that entered the downturn with only modest unrealized gains. Thus, losses can be harvested in portfolios with unrealized gains of up to 50% (but not 100%) of the cost basis.[1] This means that in most cases, to beat a buy-and-hold, loss-harvesting investor, a market timer needs an even lower reentry point than our original calculation suggested.

> The data is unequivocal: most market timers end up with lower returns than those of long-term, buy-and-hold investors

Essentially, harvesting losses during a downturn adds tangible value—value that fluctuates based on the size of the pullback itself. While not as great as the potential value from perfectly threading the market-timing needle, loss harvesting is infinitely more reliable. It represents the silver lining that buy-and-hold investors can count on to boost after-tax returns should a market decline come to fruition. To compensate for waiving this compelling benefit, we must raise the bar in terms of the magnitude of the decline required for the market timer to be made whole.

Note that the investor who prematurely retreats doesn't have to wait for the market's bottom to match the after-tax performance of those who stayed put over the full 10-year period. Hypothetically, if the 20% and 40% declines occur immediately after the market-timing investor exits—but all that's required is a 9% drop before reentering—the investor can wade in and ride the market down or wait until it climbs back to within 9% of their original exit level. Think of it as a zone of market reentry points where the market timer could either underperform (any point exceeding 9% below the exit point, including higher market levels) or outperform (anywhere at least 9% below the exit point).

DON'T GUESS…INVEST

To come out ahead, a taxable investor contemplating a hasty retreat must pinpoint how far the market must fall before reentering makes sense mathematically. Doing so requires knowing:

1. The size of the embedded gains in your portfolio, and the taxes you will pay upon realizing them now
2. The size of any market downturn following your decision to exit the market
3. The losses you might have been able to harvest had you stayed invested (assuming the market subsequently declined)
4. The returns generated by stocks over your true time horizon (e.g., 5, 10 years)
5. Whether you will have the courage to reenter the market if and when it falls to the level that warrants reentry
6. And perhaps whether you will have the opportunity to harvest tax benefits if the market dips further after you wade back in.[2]

Because most of this is ultimately unknowable, investors who attempt to time the market must acknowledge the inherent riskiness of their approach. The data is unequivocal: most market timers end up with lower returns than those of long-term, buy-and-hold investors. Our analysis should help illustrate why.

1 *Note that in order to produce offsetting losses, the exact trigger point during 20% and 40% market declines is for unrealized gains to exceed 25% and 67% of the portfolio's cost basis, respectively. Moreover, the reentry points don't change for portfolios with larger than 100% unrealized gains—unless the market falls by more than 40%.*

2 *But why would you reenter the market if you knew it was going to fall further?*

PLANNING HELPS RESIST THE TIMING URGE

Even investors who have weighed the math of market timing in a measured, clinical way are likely to consider abandoning equities in times of stress. That's because market timing usually represents an emotional reaction—not the output of careful analysis.

We believe thorough planning is the best way to avoid succumbing to such visceral reactions. At its core, robust planning involves both defining your financial goals and how you intend to achieve them. The overriding goal for our clients remains financing their lifestyles for the rest of their lives. We call the amount set aside to achieve this goal—regardless of what markets throw your way—your "core capital."

> Successful investors reduce the temptation to time the market by engaging in thorough planning

The amount of core capital you need depends on many factors, including your age, projected spending, and asset allocation. If you haven't yet reached your core capital, we can help you plot a course toward it. If you have already secured it, we can suggest an asset allocation that will improve your likelihood of maintaining it. Once established, your core capital already factors market declines into your plan—rendering them much less threatening.

Asset allocation decisions can also reduce your sensitivity to market fluctuations. Many of our clients rely on stocks for long-term growth, while maintaining exposure to bonds for income, stability, and diversification. Yet even though the traditional portfolio of stocks and bonds has worked well over the last 30 years, achieving above-market returns may require a combination of traditional assets and alternative strategies going forward. For instance, private equity or private credit strategies can add upside potential through return sources that are less correlated to traditional stocks or bonds. For this reason, they can both enhance expected returns and reduce the severity of any portfolio declines caused by a market downturn.

There are many benefits to a proactive planning approach; among them, the ability to make better life decisions—including avoiding the temptation to time the markets. If you can reframe your question from:

- "How likely is a market decline?" to
- "What will be the effect of a market decline on my ability to achieve my long-term plans?"

and answer, "Not much!" then you are less likely to jeopardize your future self with emotional decision-making.

MARKETS ARE RESILIENT...ARE YOU?

Market timing is hard—doubly so for taxable investors. Success involves nailing two decisions: when to leave, and when to come back. As much as investors struggle with the former, the latter often proves more difficult. That's because it rests heavily on variables you can't predict when exiting or reentering. Most investors—and especially taxable ones—will need to jump back in at a lower point than where they initially left off. For taxable investors, the optimal reentry point is a function of the tax bill you'll owe on exiting, as well as:

1. How far the market falls after you exit
2. Whether that decline would have created tax-loss harvesting opportunities had you stayed invested, and
3. The magnitude of the rebound between now and when you really need the money.

Successful investors reduce the temptation to time the market by engaging in thorough planning. That includes developing an asset allocation that you're confident can withstand a market downturn without seriously jeopardizing your long-term financial goals. Be kind to your future self and put the necessary safeguards in place now. If a market decline does occur, know that there's a silver lining for those who stay invested: the ability to secure powerful tax benefits through loss harvesting. Above all, remember that throughout history, the most effective strategy has been to buy low and sell high—and that those who engage in market timing will likely end up doing just the opposite.

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