RETIREMENT MANAGEMENT JOURNAL

Forthcoming in Volume 14, Number 1, 2025

U.S. Asset Class Returns Based on Time Horizons, Size, and Style

By Stephen J. Huxley, PhD, Brent Burns, and Jeremy Fletcher, CFA®

INVESTMENTS & WEALTH INSTITUTE®

U.S. Asset Class Returns Based on Time Horizons, Size, and Style

BY STEPHEN J. HUXLEY, PHD, BRENT BURNS, AND JEREMY FLETCHER, CFA®

Abstract

This article updates to 2023 the most pertinent data from "Safety Zones, Danger Zones, and the Critical Path–Visualizing U.S. Asset Class Returns Based on Time Horizons, Size, and Style" (Huxley and Burns 2018). The original article analyzed data from 1928–2017 inclusive. The addition of six new years of data changed none of the conclusions from the original analysis by any significant amount, and new figures and tables all would look essentially the same. Mathematically, adding the six additional years of data created little change in the primary table 1, with an average difference of less than 0.2 percent between the dataset ending in 2023 versus 2017.

Introduction

Financial planners, and probably all financial professionals, are trained to understand that short-term movements in the market should be considered random noise around long-term trends. Investing based on short-term movements could be considered a form of gambling.

But it is a fact that many clients fall prey to "recency bias," the name given by research psychologists to the tendency of giving undue weight to the most recent information. It is recognized as one of more than 50 cognitive biases, generally defined as "systematic patterns of deviation from norm and/or rationality in judgment."[1] Research has shown that the correlations for successive returns on a daily, weekly, monthly, quarterly, and annual basis have very low correlations. Only decades-long time spans achieve high correlations (Huxley et al. 2023)

Recency bias is instinctual in humans and stems from when we lived in caves and needed to be aware of our immediate surroundings lest we become lunch for a hungry saber-toothed tiger. Today, driving a car requires us to be aware of what is going on immediately around us.

According to the Charles Schwab "Befi Barometer" survey in 2021 (Cerulli 2021), recency bias was the bias that advisors reported they dealt with most often. Feeding the instinct are breaking headlines and hourly media reports on the most recent market volatility and, by implication, investment returns. In the same Cerulli survey, advisors reported that the best mitigation technique, not surprisingly, is to remind clients to keep a long-term perspective by presenting the facts of how the market has behaved over time. The purpose of this article is to provide an update on the relevant historical facts.

Historical Facts: The Average and the Best

Table 1 captures the essence of the importance of the long-term behavior of the market for each of the nine asset classes found in Morningstar's style box, from large-cap value to small-cap growth (Baldridge 2024). It shows the average, worst, and best returns for time horizons from one to 30 years. It also shows the ending years in which the best and worst occurred for each time horizon.

Table 1A shows the average returns for each asset class. For example, large-cap core stocks returned an average of 9.6 percent per year over all five-year time horizons (overlapping 1928–1932, 1929–1933, etc.). Note that the best average over all five-year spans was small-cap value (15.3 percent). In fact, small-cap value had the best average over all time horizons shown; it achieved an average return of 16.6 percent over all 30-year spans. Small-cap value's top-achiever status is highlighted in yellow in table 1A.

IT WAS THANKS TO BEN BERNANKE, WHO PUBLISHED RESEARCH ABOUT THE CAUSES OF THE GREAT DEPRESSION AND WAS HEAD OF THE FEDERAL RESERVE AT THE TIME, THAT THE NASTY EXPERIENCE OF 2008 LASTED ONLY ONE YEAR.

The bottom of table 1C shows that the single best five-year span for small-cap value was 1932–1936, when small-cap value returned an average of 50.9-percent per year, the best of all five-year horizons. Many of the best and worst extremes of returns occurred during the Great Depression, which lasted from 1929 until 1941. It was thanks to Ben Bernanke, who published research about the causes of the Great Depression (Bernanke 1983) and was head of the Federal Reserve at the time, that the nasty experience of 2008 lasted only one year. During the best 30-year span,1975–2004, those who invested in small-cap value stocks got average returns of 22.7 percent per year.

TABLE 1 Average, Worst, and Best Returns for 1-, 5-, 10-, 15-, 20-, and 30-Year Holding Periods, 1928–2023

Asset Classes: Value (V), Core (C), Growth (G), Large-cap, Mid-cap, Small-cap

1A: AVERAGE RETURNS

	1-YEAR			5-YEAR			10-YEAR			15-YEAR			20-YEAR			30-YEAR		
	V	C	G	V	C	G	V	C	G	V	C	G	V	C	G	V	C	G
LARGE-CAP	10.9%	9.2%	10.5%	11.3%	9.6%	10.3%	11.5%	10.2%	10.3%	11.5%	10.4%	10.3%	11.7%	10.7%	10.4%	12.0%	11.0%	10.6%
MID-CAP	12.7%	12.0%	10.3%	13.3%	12.5%	10.7%	13.9%	12.8%	10.8%	14.4%	12.9%	10.8%	14.8%	13.1%	10.8%	15.2%	13.3%	10.9%
SMALL-CAP	14.3%	12.8%	8.9%	15.3%	13.5%	9.7%	15.7%	13.8%	9.7%	16.0%	14.0%	9.6%	16.4%	14.2%	9.6%	16.6%	14.4%	9.7%

1B: SINGLE WORST RETURNS

LARGE-CAP	−55.0% 1931	−63.8% 1931	−36.0% 1931	−14.7% 1931	−22.5% 1932	−9.4% 1933	−6.2% 2008	−5.6% 1939	−0.1% 2008	−1.0% 2012	−1.7% 1942	1.3% 1943	0.6% 2018	1.2% 1948	2.9% 1948	6.8% 2023	6.5% 1957	7.8% 1958
MID-CAP	−52.8% 1931	−50.3% 1931	−39.6% 1931	−20.8% 1932	−20.0% 1932	−18.0% 1932	−7.9% 1939	0.4% 1937	−1.8% 1974	−2.1% 1942	3.1% 1942	1.0% 1943	3.5% 1948	6.4% 1948	3.1% 1948	8.4% 1957	10.2% 1957	7.5% 1975
SMALL-CAP	−52.5% 1931	−49.2% 1937	−49.4% 1937	−23.9% 1932	−20.7% 1932	−24.6% 1932	−2.1% 1938	0.3% 1937	−2.5% 1937	1.5% 1941	3.2% 1942	0.3% 1974	7.5% 1948	6.1% 1948	3.7% 1948	11.0% 1957	9.8% 1957	6.0% 2010

1C: SINGLE BEST RETURNS

LARGE-CAP	118.8% 1933	79.1% 1933	49.2% 1928	43.0% 1936	22.8% 1954	30.8% 1999	23.5% 1951	18.4% 1958	20.9% 1998	22.3% 1956	18.7% 1989	20.0% 1999	20.0% 1998	17.7% 1998	17.8% 1999	18.2% 1961	15.7% 2004	13.3% 2004
MID-CAP	125.7% 1933	121.0% 1933	96.2% 1933	40.5% 1945	40.7% 1936	31.3% 1936	27.2% 1951	21.9% 1984	18.5% 1984	24.2% 1955	20.4% 1989	18.3% 1989	21.2% 1961	19.3% 1961	16.5% 1994	20.1% 2004	17.7% 1961	15.0% 2004
SMALL-CAP	131.9% 1933	114.7% 1933	142.7% 1933	50.9% 1936	41.6% 1936	41.3% 1936	32.9% 1984	29.1% 1984	23.0% 1984	27.3% 1989	24.8% 1989	18.8% 1947	23.5% 1994	21.6% 1994	17.5% 1952	22.7% 2004	20.3% 2004	15.8% 1961

<−20%		−10% to 0%	0%	0% to 10%		>+20%	Top

Source: Center for Research in Security Prices (CRSP), University of Chicago Booth School of Business

Historical Facts: The Worst

Table 1B shows the worst-case scenario for the same time horizons. The worst-case five-year scenario was negative for all asset classes, with the worst of the worst being –24.6 percent per year for small-cap growth. In the 10-year spans, none of the asset classes were positive (0 percent means between –0.5 percent and +0.5 percent). Even in the 15-year spans, several asset classes still showed negative returns, and those that were positive were nothing to brag about.

Table 1 suggests that spans longer than 15 years are needed before all asset classes become positive. The exact span for each asset class to reach 100-percent positive returns varies, but all are positive by 17 years. It is an unfortunate fact that it takes this long to reach assurance of gain, regardless of what some advisors are willing to tell clients.

Examinations of the worst-case scenario are based on the "minimax" principle first elucidated by John von Neumann (von Neumann and Morgenstern 1944), which states that decision-makers seek to minimize their maximum possible losses. Its twin is the "maximin" principle, which states that decision-makers seek to maximize their minimum gains. Most analysts focus on average returns or Sharpe ratios, where risk is measured only by volatility. But conservative clients often are more concerned about the worst thing that can happen to their portfolios over time. The path that minimum return yield curves follow over long time horizons have been traced (Huxley et al. 2016). At least one investment firm uses proprietary mathematical algorithms to find allocations for equity portfolios that maximize the minimum gain that can be achieved over various time horizons (Huxley et al. 2020).

Growth of $10,000

Fund managers discovered long ago that a more dramatic display of results of different returns is to demonstrate the ending value of a $10,000 investment. Differences in ending values provide a better perspective than annual returns for most clients. Table 2 illustrates the ending value of $10,000 for each of the time spans and returns shown in table 1.

As expected, the most dramatic results for average returns are 30-year spans, with small-cap value (at 16.6 percent per year) growing from $10,000 to $1,009,600, and large-cap growth (9.7 percent) bringing up the rear, turning $10,000 into $206,600.

Even in the worst-case scenarios, holding on for 30 years results in a small-cap value investment at 11.0 percent per year that grows from $10,000 to $227,400, which beat the average for all sizes of growth funds growing at their average rates.

When it comes to the best 30-year spans, of course, small-cap value (22.7 percent for 1975–2004) would have grown $10,000 to $4,625,100.

TABLE 2 **Growth of $10,000 (in Thousands of Dollars)**

1A: Average

	1-YEAR			5-YEAR			10-YEAR			15-YEAR			20-YEAR			30-YEAR		
	V	C	G	V	C	G	V	C	G	V	C	G	V	C	G	V	C	G
LARGE-CAP	$11.1	$10.9	$11.0	$17.1	$15.8	$16.3	$29.7	$26.4	$26.7	$51.3	$44.2	$43.3	$91.8	$76.5	$72.1	$303.4	$231.0	$206.6
MID-CAP	$11.3	$11.2	$11.0	$18.7	$18.0	$16.6	$36.8	$33.4	$27.9	$75.2	$61.8	$46.3	$158.9	$117.7	$78.0	$692.1	$423.0	$222.6
SMALL-CAP	$11.4	$11.3	$10.9	$20.4	$18.8	$15.9	$43.0	$36.4	$25.2	$92.7	$70.9	$39.5	$206.8	$141.6	$62.7	$1,009.6	$561.1	$160.0

1B: Single Worst

LARGE-CAP	$4.5 1931	$3.6 1931	$6.4 1931	$4.5 1931	$2.8 1932	$6.1 1933	$5.3 2008	$5.6 1939	$9.9 2008	$8.5 2012	$7.8 1942	$12.2 1943	$11.4 2017	$12.8 1948	$17.9 1948	$71.6 2015	$66.1 1957	$95.7 1958
MID-CAP	$4.7 1931	$5.0 1931	$6.0 1931	$3.1 1932	$3.3 1932	$3.7 1932	$4.4 1939	$10.4 1937	$8.3 1974	$7.3 1942	$15.9 1942	$11.5 1943	$19.8 1948	$34.8 1948	$18.5 1948	$112.0 1957	$183.0 1957	$86.5 1975
SMALL-CAP	$4.8 1931	$5.1 1937	$5.1 1937	$2.6 1932	$3.1 1932	$2.4 1932	$8.1 1938	$10.3 1937	$7.8 1937	$12.5 1941	$15.9 1942	$10.4 1974	$42.3 1948	$33.0 1948	$20.8 1948	$227.4 1957	$166.5 1957	$57.7 2010

1C: Single Best

LARGE-CAP	$21.9 1933	$17.9 1933	$14.9 1928	$59.9 1936	$28.0 1954	$38.3 1999	$82.5 1951	$54.3 1958	$66.9 1998	$205.8 1956	$130.7 1989	$154.7 1999	$386.0 1998	$260.2 1998	$264.8 1999	$1,501.2 1961	$784.7 2004	$423.6 2004
MID-CAP	$22.6 1933	$22.1 1933	$19.6 1933	$54.7 1945	$55.1 1936	$39.0 1936	$111.0 1951	$72.6 1984	$54.7 1984	$259.4 1955	$162.3 1989	$124.0 1989	$464.8 1961	$339.9 1961	$213.0 1994	$2,447.4 2004	$1,311.9 1961	$670.6 2004
SMALL-CAP	$23.2 1933	$21.5 1933	$24.3 1933	$78.3 1936	$57.0 1936	$56.3 1936	$171.8 1984	$129.0 1984	$79.2 1984	$373.5 1989	$278.6 1989	$132.1 1947	$686.4 1994	$501.9 1994	$250.1 1952	$4,625.1 2004	$2,528.8 2004	$824.2 1961

<-20%			-10% to 0%	0%	0% to 10%		>+20%	Top

TABLE 3 **Dominance of Small-Cap Value Stocks**

1-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	30-YEAR
Small Value 14.3% Average	Small Value 15.3% Average	Small Value 15.7% Average	Small Value 16.0% Average	Small Value 16.4% Average	Small Value 16.6% Average
Large Growth −36.0% 1931	Large Growth -9.4% 1933	Mid Core 0.4% 1937	Small Core 3.2% 1942	Small Value 7.5% 1948	Small Value 11.0% 1957
Small Growth 142.7% 1933	Small Value 50.9% 1936	Small Value 32.9% 1984	Small Value 27.3% 1989	Small Value 23.5% 1994	Small Value 22.7% 2004

This is almost double that of the next best asset classes, small-cap core ($2,428,800) and mid-cap value ($2,447,400).

The Horseshoe

One way to visualize the dominance of small-cap value in tables 1 and 2 is to visualize the shape of a horseshoe created by the top performers for each time span. Table 3 displays the results, with the horseshoe open at the left end. As most financial advisors know, it is tough to beat most small-cap value stock funds in the long run.

Conclusion

The updated results reported in this article include the six most-recent years of data and lead to the same conclusions as Huxley and Burns (2018). Recency bias is an unfortunate misperception that must be dealt with. The authors hope that these tables will provide a bit more ammunition for advisors trying to fight recency bias and help clients focus on the long run when making investments decisions.

AS MOST FINANCIAL ADVISORS KNOW, IT IS TOUGH TO BEAT MOST SMALL-CAP VALUE STOCK FUNDS IN THE LONG RUN.

Stephen J. Huxley, PhD, is managing director, research, and founding partner of Asset Dedication. Contact him at huxleys@assetdedication.com.

Brent Burns is president and founding partner of Asset Dedication. Contact him at burnsb@assetdedication.com.

Jeremy Fletcher, CFA®, is managing director, investments and partner at Asset Dedication. Contact him at fletcherj@assetdedication.com.

ENDNOTE

1. "List of Cognitive Biases," Wikepedia (2024), https://en.wikipedia.org/wiki/List_of_cognitive_biases.

REFERENCES

Baldridge, R. 2024. Understanding the Mutual Fund Style Box. *Investopedia* (April 19, 2024). https://www.investopedia.com/articles/basics/06/stylebox.asp.

Bernanke, B. S. 1983. Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression. *American Economic Review* 73, no. 3 (June): 257–276.

Cerulli Associates. 2021. Befi Barometer 2021, commissioned by Charles Schwab in collaboration with the Investments & Wealth Institute. https://publications.investmentsandwealth.org/iwpublications/library/item/befi_barometer2021/4141265/.

Huxley, S., and B. Burns. 2004. *Asset Dedication: How to Grow Wealthy with the Next Generation of Asset Allocation*. McGraw Hill.

——. 2018. Safety Zones, Danger Zones, and the Critical Path: Visualizing U.S. Asset Class Returns Based on Time Horizons, Size, and Style. *Retirement Management Journal* 7, no. 1: 46–56. https://www.assetdedication.com/wp-content/uploads/2019/03/RMJ-Article-on-Visualizing-as-published-12-2018.pdf.

Huxley, S., B. Burns, and J. Fletcher. 2016. Equity Yield Curves, Time Segmentation, and Portfolio Optimization Strategies. *Journal of Financial Planning* 39, no. 11 (November): 54–61.

——. 2020. How Dedicated Portfolios Reduce Behavioral Risk. *Advisor Perspectives* (May 11). https://www.advisorperspectives.com/articles/2020/05/11/how-dedicated-portfolios-reduce-behavioral-risk?topic=retirement.

——. 2023. Fighting Recency Bias. *Advisor Perspectives* (December 5). https://www.advisorperspectives.com/articles/2023/12/05/fighting-funds-recency-bias-fixed-income.

Von Neumann, J., and O. Morgenstern. 1944. *Theory of Games and Economic Behavior*. Princeton University Press.

INVESTMENTS & WEALTH INSTITUTE®

5619 DTC Parkway, Suite 600
Greenwood Village, CO 80111
Phone: +1 303-770-3377
Fax: +1 303-770-1812
www.investmentsandwealth.org