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PERSPECTIVES

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Looking at U.S. Stock Market Returns After Adjusting for Inflation

While most financial data is presented in terms of ***nominal returns*** (*i.e*., returns with no adjustment for inflation), we should give due consideration to the effects of inflation. This is because a central purpose of stock market investing is to possess a return exceeding the rate of inflation over the long term.

Accordingly, in the charts on the subsequent pages, I subtract the rate of inflation (or add the rate of deflation), as measured by the U.S. Consumer Price Index for Urban Areas, for each set of periods shown. This results in the data providing "**inflation-adjusted returns**" (also known as "**real returns**").

For our data in this section, as a proxy for the U.S. stock market, we utilize the Standard & Poor's 500 Index®, which is an index of U.S. large company stocks that typically represents about 80% to 90% of the total market capitalization of U.S. publicly traded stocks.

Please note that in the data presented, no adjustment is made for mutual fund fees, transaction costs within a mutual fund, custodial fees (such as transaction costs that might be charged by Charles Schwab or another discount broker), nor for the fees that might be charged by an investment adviser. You cannot invest directly in an index.

Examining Annual Real Returns for U.S. Stocks

Estimated Inflation-Adjusted Annual Returns

for the S&P 500 Index® Over Calendar-Year Periods, 1926-2023

							2019 29.20%		
				2016 9.89%		1980 19.89%	1985 28.37%		
			1930 -18.50%	2004 7.62%		2017 19.72%	1991 27.40%		
			1990 -9.21%	1993 7.32%		1996 19.64%	1998 26.97%	EXCEPTIONAL YEARS	
			1929 -8.99%	1968 6.36%		1976 18.98%	1989 26.84%		
			2018 -6.29%	1979 5.13%	2012 14.26%	1983 18.72%	2003 26.81%		
		1969 -14.68%	1947 -3.14%	1992 4.72%	2010 13.57%	1999 18.36%	1961 26.21%	1927 39.74%	
POOR YEARS		1977 -13.88%	1934 -2.95%	1956 3.57%	2006 13.26%	1951 18.02%	1950 25.81%	1995 35.04%	
		1981 -13.83%	1978 -2.44%	1948 2.52%	2014 12.93%	1952 17.60%	2009 23.74%	1945 34.17%	
		1957 -13.69%	1953 -1.72%	1984 2.32%	1926 12.72%	1982 17.58%	1943 22.95%	1938 33.91%	
	1946 -26.21	1966 -13.51%	1970 -1.54%	1932 2.08%	1988 12.29%	1944 17.43%	2023 22.94%	1936 32.47%	1954 53.37%
1974 -38.80%	2022 -24.56%	2001 -13.44%	1994 -1.35%	2005 1.50%	1942 11.30%	1986 17.37%	2021 21.67%	1997 31.66%	1933 53.21%
1937 -37.88%	2002 -24.48%	2000 -12.49%	1960 -0.90%	2007 1.41%	1971 11.05%	2020 17.04%	1963 21.13%	1955 31.16%	1928 44.76%
2008 -37.09%	1973 -23.37%	1940 -10.49%	2011 -0.85%	1987 0.80%	1965 10.53%	1972 15.57%	1967 20.95%	2013 30.89%	1935 44.67%
1931 -34.03%	1941 -21.51%	1962 -10.06%	1939 -0.42%	2015 0.65%	1959 10.25%	1964 15.54%	1949 20.86%	1975 30.28%	1958 41.61%

Past performance is no guarantee of future results. Negative returns are more impactful on an investment portfolio than positive returns. For example, a 20% decline in portfolio value must be followed by a 25% positive return to reach the original portfolio value. Investing risks include loss of principal and fluctuating value. There is no guarantee an investment strategy will be successful. Indices are not available for direct investment. The performance of the S&P 500 Index® does not reflect the expenses associated with the management of an actual portfolio, including but not limited to mutual fund or exchange-traded or other fees and costs, transaction costs, and fees that may be charged by investment advisers. The foregoing assumes all dividends and realized capital gains are reinvested and no deduction is made for taxes which might be due on any distributions of capital gains, dividend, or interest, or otherwise incurred by an investor. The S&P 500 Index and CPI-U data is derived from Dimensional's Returns Web software, which in turn is sourced from Ibbotson data courtesy of Stocks, Bonds, Bills, and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated works by Roger C. Ibbotson and Rex A. Sinquefield), and Morningstar. Inspiration for the format of this chart and for this article is derived from "The Rewarding Distribution of U.S. Stock Market Returns" from Dimensional, which utilized CRSP data for U.S. stocks, but which did not adjust returns for inflation.

As seen in the chart on the prior page, the U.S. stock market (as represented by the S&P 500 Index®) posted positive *inflation-adjusted* returns in only 68% of the calendar years from 1926 through 2023. In other words, about one-third of all calendar-year returns for the U.S. stock market are negative.

As an indication of the inherent short-term volatility of the stock market, approximately 65% of the calendar-year inflation-adjusted returns were at least 10 percentage points above or below the average inflation-adjusted returns of approximately 7% per year from 1926 through 2023.

Examining 10-Year Real Returns for U.S. Stocks

As stock market investing is a *long-term* endeavor, we next view an estimate of the inflation-adjusted returns for the Standard and Poor's 500 Index® over each decade ending from 1935 through 2021.

As seen in the chart on the page following, there is greater probability of positive inflation-adjusted stock market returns when a decade-long time horizon is considered. Still, in 27 of the 85 decade-long periods surveyed, the inflation-adjusted rate of return was less than 5%, and 10 of those decade-long periods possessed negative average annual returns.

Estimated Inflation-Adjusted Average Annual Returns for the S&P 500 Index®
Over 10-Year Rolling Periods, For Each Year Ending from 1935 through 2021

		1944-53 9.85%		
		1995-2004 9.64%		
		1981-1990 9.45%	1991-2000 14.79%	
		1956-1965 9.34%	1988-1997 14.65%	
		1978-1987 8.87%	1954-1963 14.51%	
		1994-2003 8.69%	1948-1957 14.48%	
		1926-1935 8.42%	2012-2021 14.41%	
		1959-1968 7.93%	1951-1960 14.39%	
		1941-1950 7.49%	1982-1991 13.69%	
		1975-1984 7.43%	1945-1954 12.98%	
		1957-1966 7.43%	1946-1955 12.74%	
	2003-2012 4.69%	1976-1985 7.32%	1980-1989 12.45%	
	1938-1947 4.64%	1977-1986 7.20%	1943-1952 12.41%	
	1934-1943 4.37%	1993-1942 6.77%	1983-1992 12.37%	
	1962-1971 3.87%	2008-2017 6.88%	2011-2020 12.14%	
	1940-1949 3.82%	1933-1942 6.77%	1953-1962 12.14%	
	1998-2007 3.23%	1996-2005 6.56%	2010-2019 11.81%	
"Lost Decades"	1931-1940 1.98%	1963-1972 6.54%	1942-1951 11.77%	
1965-1974 -3.97%	1974-1983 2.45%	1935-1944 6.40%	1987-1996 11.61%	
1999-2008 -3.90%	1930-1939 1.98%	1997-2006 5.98%	1986-1995 11.41%	
1969-1978 -3.50%	1964-1973 1.91%	1932-1941 5.83%	2009-2018 11.32%	
2000-2009 -3.47%	1928-1937 1.84%	1836-1945 5.61%	1955-1964 11.25%	"Jubilant Decades"
1968-1977 -2.64%	1939-1948 1.68%	2005-2014 5.55%	1984-1993 11.24%	1949-1958 18.23%
1966-1975 -2.44%	1929-1938 1.68%	2006-2015 5.45%	1958-1967 11.07%	1950-1959 17.13%
1972-1981 -2.16%	1967-1976 0.77%	1960-1969 5.30%	1985-1994 10.82%	1989-1998 16.07%
1973-1982 -1.99%	2002-2011 0.44%	1961-1970 5.25%	1992-2001 10.43%	1947-1956 15.90%
1970-1979 -1.50%	1971-1980 0.40%	2007-2016 5.14%	1979-1988 10.39%	1990-1999 15.28%
2001-2010 -0.92%	1937-1946 0.03%	2004-2013 5.03%	1927-1936 10.12%	1952-1961 15.18%

Past performance is no guarantee of future results.

For additional disclosures and sources of data, see prior chart.

Examining 20-Year Real Returns for U.S. Stocks

Historically, over even longer periods of time the rewards from investing in stocks are usually far greater than the rewards from investing in "safe" short-term fixed income securities. Hence, we next view an estimate of the inflation-adjusted returns for the Standard and Poor's 500 Index® over each 20-year period from 1945 through 2021:

Estimated Inflation-Adjusted Average Annual Returns for the S&P 500 Index®
Over 20-Year Rolling Periods, For Each Year Ending from 1945 through 2021

"Good" 20-Year Periods	*"Great" 20-Year Periods*	*"Exceptional" 20-Year Periods*
1971-1990 **4.91%**	**1939-1958** **9.79%**	
1958-1977 **4.14%**	**1951-1970** **9.75%**	
1957-1976 **4.11%**	**1935-1954** **9.62%**	
1967-1986 **3.93%**	**1933-1952** **9.53%**	
1955-1974 **3.50%**	**1938-1957** **9.52%**	
1956-1975 **3.40%**	**1952-1971** **9.43%**	
1969-1988 **3.25%**	**1953-1972** **9.43%**	
1928-1947 **3.19%**	**1936-1955** **9.10%**	
1968-1987 **2.96%**	**1932-1951** **8.70%**	
1930-1949 **2.86%**	**1954-1973** **8.11%**	**1942-1961** **13.50%**
1961-1980 **2.86%**	**1937-1956** **7.75%**	**1949-1968** **12.97%**
1966-1985 **2.30%**	**1934-1953** **7.06%**	**1948-1967** **12.76%**
1963-1982 **2.30%**	**1926-1945** **7.04%**	**1943-1962** **12.27%**
1959-1978 **2.19%**	**1974-1993** **6.85%**	**1944-1963** **12.19%**
1964-1983 **2.17%**	**1972-1991** **5.65%**	**1947-1966** **11.57%**
1960-1979 **1.92%**	**1970-1989** **5.33%**	**1950-1969** **11.07%**
1965-1984 **1.52%**	**1931-1950** **5.21%**	**1946-1965** **11.01%**
1929-1948 **1.38%**	**1973-1992** **5.12%**	**1941-1960** **10.95%**
1962-1981 **0.89%**	**1927-1946** **5.12%**	**1940-1959** **10.37%**

Past performance is no guarantee of future results. For additional disclosures and sources of data, see a prior chart in this article.

As seen, in all the foregoing 20-year periods surveyed, the S&P 500 Index® possessed average annual returns exceeding that of the rate of inflation. However, the range of average annualized real returns varied from a low of 0.89% to a high of 13.50%.

In Conclusion

How do we best invest to accumulate wealth over time? By investing in asset classes – collections of stocks, bonds, or other securities or investments – that significantly outperform the rate of inflation over longer time periods.

For investing in stocks, even on a highly diversified basis, this means accepting shorter-term volatility. As seen, there are many one-year periods, and even ten-year periods, where U.S. large company stocks did outperform the rate of inflation. But over longer 20-year periods in the modern era of the U.S. stock market (i.e., since 1926), U.S. stocks outperformed the rate of inflation every time – and often by significant margins.

Many investors have a longer time horizon than they may anticipate. For example, for a person aged 60, his or her life expectancy may well be, on average, 25-30 years. But many persons live beyond the average. Even then, investment portfolios are often maintained to support not just the current generation, but to also lend support to one's heirs.

Due to developments in medical sciences, including but not limited to developments in the science of aging, it is likely that well over half of today's young Americans will live past age 100.

All my best,

Ron

Dr. Ron A. Rhoades serves as Associate Professor of Finance and Director of the Personal Financial Planning Program within the Gordon Ford College of Business at Western Kentucky University. He teaches and has taught courses in Retirement Planning, Applied Investments, Advanced Investments, Estate Planning, Financial Plan Development, Personal Finance, Money & Banking, Legal and Regulatory Aspects of Personal Financial Planning, Risk Management and Insurance, and Principles of Finance. He is the 2019-20 and 2023-4 winner of the Teaching Award for the Gordon Ford College of Business, and he was also awarded a Teaching Fellowship for the 2023-4 academic year.

Dr. Rhoades is regarded as a national expert in the application of fiduciary duties to the delivery of investment and financial planning advice. He received the Tamar Frankel Fiduciary Prize in 2020 from The Institute for the Fiduciary Standard, and he received the Fiduciary of the Year award in 2011 from The Committee for the Fiduciary Standard. Ron has frequently visited policy makers in Washington, DC, and has authored numerous comment letters and provided testimony on the fiduciary standard of conduct.

Dr. Rhoades has served on many industry committees and task forces. He currently serves on the Standards Resource Commission of the Certified Financial Planner Board of Standards, Inc., and he chairs its Practice Standards subcommittee.

Ron has published several books and numerous articles, and he is frequently quoted in the media. Ron's forthcoming book, *Mastering the Science and Art of Investing: Strategies for Maximizing Returns with Multi-Factor Portfolios*, is anticipated to be published in 2024.

ADDITIONAL DISCLOSURES

Past performance is not a guarantee of future performance. Data represents the returns of various indexes, Dimensional Funds Advisors mutual funds and ETFs, in each broad asset class. Within each asset class are varying degrees of exposures to the profitability, value, size, investment, and momentum factors. **You cannot invest directly in an index, and index returns do not reflect mutual fund / ETF fees (annual expense ratio), nor do they reflect internal transaction and opportunity costs within the fund relating to transactions of securities within the fund and/or the presence of cash holdings.** Data provided through DFA Returns Web program and is believed to be accurate but cannot be guaranteed.

Fund, ETF, and index returns do not reflect any deduction for the fees that are charged or would have been charged by Scholar Financial, LLC, nor any transaction costs which may be incurred with a custodian (i.e., Charles Schwab, etc.). Fund, ETF and index fund returns are also presented pre-tax (*i.e.*, no adjustment is made for the impact of federal, state or local income taxes that might be incurred by the owner (taxpayer), nor for tax credits that may be available when foreign securities are held by a mutual fund or ETF).

The index set forth in the tables above is not necessarily recommended by Scholar Financial, LLC, and the historical returns are presented solely for educational purposes. Be aware that other mutual funds (such as Dimensional Fund Advisors' "core equity" and "targeted value" funds and ETFs, which possess exposures to multiple "factors" with on average lower portfolio turnover levels and lower annual expense ratios) are often recommended by Scholar Financial, LLC to its clients; such funds and ETFs possess exposures to multiple asset classes.