



**SELECT PORTFOLIO  
MANAGEMENT, INC.**  
Integrated Wealth Management  
A Registered Investment Advisor



White Paper

*The “New Math” of Retirement Income Distribution*

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## Wealth Utilization

Wealth accumulation is like climbing Mt. Everest to the top. Creating a predictable, sustainable, lifetime retirement income is analogous to safely getting back down to the bottom. You don't want to run out of supplies half way back down or run out of money during your lifetime and at SPM we take great care to help you make the very best decisions regarding your wealth. We start by challenging you to answer reflective questions such as the ones below:



1. How much will I need in retirement to meet my desired lifestyle?
2. Where should I invest now?
3. How much will inflation affect my retirement income and lifestyle throughout my life?
4. What's the best way to take money out of my retirement accounts?
5. What's my best asset mix going forward?
6. What is the best way to balance the growth, safety, liquidity, taxes, cost, diversification and income requirements of my retirement portfolio?
7. What income withdrawal rate and techniques will ensure I don't outlive my money?
8. How will I pay for health-care expenses?
9. Is a Long Term Care stand alone insurance policy the best way to address a potential LTC need or is a Life insurance & LTC combined policy the better way to go?
10. Where does my home equity fit into my retirement plan?

The retirement landscape has changed and your SPM Wealth Advisor will help you better understand how the resulting changes can impact your future and your current financial decisions.

- Longer life expectancies, future inflation rates and retirement spending habits must be accounted for in **distribution plan modeling**.
- While historic average returns may be a valuable starting point for modeling in the accumulation phase, **distribution modeling is complicated by cash outflows**.
- The central concern in the distribution phase is shortfall risk, or **outliving one's assets**, so investors and advisers must develop a sound distribution strategy.
- The new math of the distribution phase emphasizes the importance of **downside risk management** and the **sequence of investment returns** — particularly in the initial years of withdrawals.
- Standard deviations and calendar-year returns are **incomplete measures of downside protection**.
- Both qualitative and quantitative analysis is needed in order to gain insight into the character of an investment manager.
- True **risk controls** are a byproduct of company **philosophy and process**.

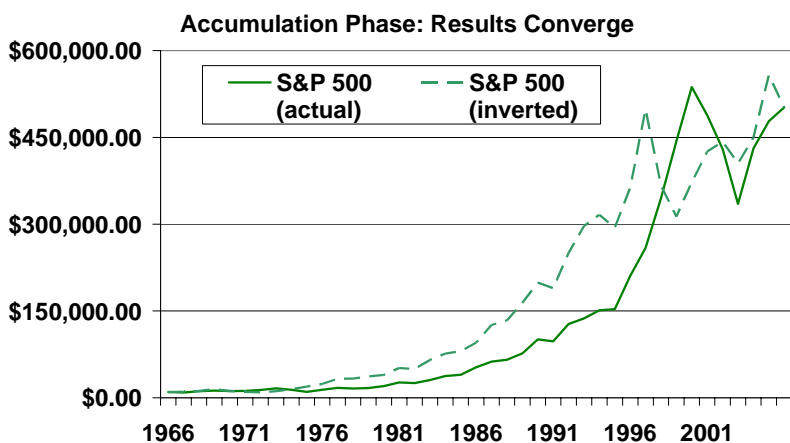
Creating sustainable retirement income portfolios is both an art and a science. Multiple uncertainties and assumptions complicate the task, as individual investors must balance portfolio stability and growth in order to meet future liabilities. Furthermore, portfolio withdrawals amplify the impact of market declines in the distribution phase. The shift from the accumulation to the distribution phase of investing requires new thinking about risk and risk metrics.

## The sequence of returns matters

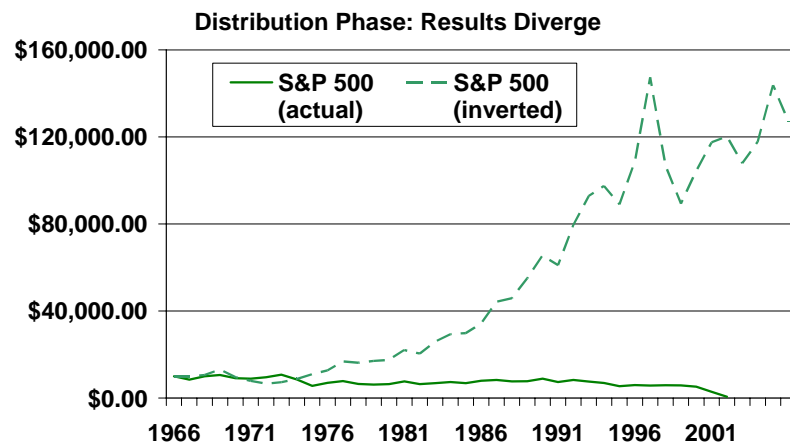
One of the most striking differences in the math of the distribution phase is that the **sequence of investment returns**, which affects only the timing of wealth generation during the accumulation years, can have a dramatic effect when distributions are being taken.

The chart at the right shows two portfolios: Portfolio A reflects actual returns for the S&P 500 from 1966 through 2005. The hypothetical Portfolio B earns the same returns in inverse order. This example illustrates the impact of the **return sequence**. Both Portfolio A and Portfolio B have average annual total returns of 10.28% and a standard deviation of 16.95. But that's where the similarity ends.

Inverting the sequence of returns has no effect on the value of a \$10,000 investment during the accumulation phase. Both portfolios converge at \$501,436, and the sequence of returns does not matter for long-term investors (see chart below).



But taking annual withdrawals makes a significant difference. Portfolio A begins the distribution phase in 1966 with a negative annual return and suffers three more in the first 10 years of retirement. Struggling to maintain a 5% inflation-adjusted payout, and damaged further by the 2000 decline, this portfolio runs out of money in 2002 (see chart below).



Year	Annual Total Returns	
	Portfolio A	Portfolio B
	S&P 500 (actual)	S&P 500 (inverted)
1966	-10.06%	4.91%
1967	23.98%	10.87%
1968	11.06%	28.70%
1969	-8.50%	-22.10%
1970	4.01%	-11.88%
1971	14.31%	-9.11%
1972	18.98%	21.04%
1973	-14.66%	28.58%
1974	-26.47%	33.36%
1975	37.20%	23.07%
1976	23.84%	37.43%
1977	-7.18%	1.31%
1978	6.56%	9.99%
1979	18.44%	7.67%
1980	32.42%	30.55%
1981	-4.91%	-3.17%
1982	21.41%	31.49%
1983	22.51%	16.81%
1984	6.27%	5.23%
1985	32.16%	18.47%
1986	18.47%	32.16%
1987	5.23%	6.27%
1988	16.81%	22.51%
1989	31.49%	21.41%
1990	-3.17%	-4.91%
1991	30.55%	32.42%
1992	7.67%	18.44%
1993	9.99%	6.56%
1994	1.31%	-7.18%
1995	37.43%	23.84%
1996	23.07%	37.20%
1997	33.36%	-26.47%
1998	28.58%	-14.66%
1999	21.04%	18.98%
2000	-9.11%	14.31%
2001	-11.88%	4.01%
2002	-22.10%	-8.50%
2003	28.70%	11.06%
2004	10.87%	23.98%
2005	4.91%	-10.06%
Average Annual Total Return:	10.28%	10.28%
Standard Deviation:	16.95%	16.95%

Average annual returns and standard deviations are identical, yet results are not symmetric.

Surprisingly, Portfolio B endured three consecutive negative years in the first decade and still comes out ahead — with 12.7 times its original investment — while easily meeting its distribution requirements.

***In this case, sequence matters.*** Over different periods of time or with different withdrawal rates, the sequence of returns has a variable effect — there may be a dramatic difference, or very little. The point of this illustration is that, ***despite having identical average annual returns and standard deviations, results in these periods are not symmetric.*** Investors in any phase are vulnerable to the market's random gyrations, but investors in the distribution phase are even more sensitive to unfortunate timing. They may retire at a favorable time in the market or during a highly unfavorable period. While there is no way to control the sequence of returns, advisers can add value by focusing on what they can control: trying to insulate portfolios from downside risk.

Hopefully, you can now understand how average returns, which are useful in accumulation-phase planning, are less meaningful when cash outflows become a key model assumption. Planning for the distribution phase must reflect this shift from simple math to models based on multiple assumptions. While risk in the accumulation phase is often summed up by volatility, the central focus in the distribution phase becomes shortfall risk, or the risk of outliving one's money.

If you are 10 years from retirement or have started taking retirement income withdrawals from your investment and savings portfolio, let us work with you to help reduce the additional risks that comes with retirement — longevity risk, inflation risk, and sequence of returns risk.

## Disclosures

This material does not constitute the rendering of investment, legal, tax or insurance advice or services. It is intended for informational use only and is not a substitute for investment, legal, tax, and insurance advice.

State, national and international laws vary, as do individual circumstances; so always consult a qualified investment advisor, attorney, CPA, or insurance agent on all investment, legal, tax, or insurance matters.

The effectiveness of any of the strategies described will depend on your individual situation and on a number of other factors. After reviewing your personal situation, we may recommend that you not use any strategy in this document but instead consider various other strategies available through our practice.

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