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CAPITAL MANAGEMENT

Behavioural Survivability and Retirement Portfolio Resilience

Why the lived experience of market recovery matters as much as the mathematics of sequencing risk.

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Executive summary

Retirement Portfolio Resilience is the discipline of helping investors remain financially and emotionally invested throughout their retirement journey, regardless of the path markets take.

Behavioural finance has significantly advanced our understanding of why investors behave as they do during periods of market uncertainty. This paper asks a different question: what is the retirement experience that gives rise to those behaviours? Rather than focusing on behavioural biases themselves, it examines the path of returns experienced during prolonged market recoveries and introduces Behavioural Survivability as an important component of Retirement Portfolio Resilience.

The previous paper in this educational series examined the mathematical consequences of sequence of returns risk. This paper considers the lived experience of those return sequences. Markets rarely recover in a straight line. Recovery paths often include sharp rallies, renewed declines and extended periods of uncertainty while retirement withdrawals continue.

The market records the eventual recovery. The retiree experiences the path of returns.

This distinction has important implications for retirement stewardship. During accumulation, ongoing contributions and dollar-cost averaging provide a natural mechanism for investing through market declines. In retirement, contributions generally cease and withdrawals begin. The primary mechanism of risk management therefore shifts from adding capital during market declines to intentionally constructing the portfolio before those declines occur.

Cash remains an important part of that solution because it provides liquidity and reduces the need to sell growth assets during periods of market stress. However, liquidity alone cannot address the behavioural challenge of watching retirement capital fluctuate throughout a prolonged recovery.

Behavioural Survivability is the capacity of both the investor and the retirement portfolio to endure the full path of market decline and recovery without decisions that permanently impair the retirement strategy.

Key insights

- The market records the eventual recovery. The retiree experiences the path of returns.
- Behavioral Survivability is tested throughout the recovery journey, not simply at the initial market decline or the eventual market trough.
- Retirement changes the primary mechanism of risk management — from ongoing contributions and dollar-cost averaging to intentional portfolio construction and embedded protection.

- Liquidity and confidence are different retirement objectives. Cash can provide liquidity; it cannot by itself preserve retirement confidence.
- Behavioral Survivability should be established before a market decline occurs, not during one.

Behavioural survivability: The research foundation

A substantial body of retirement, behavioural finance and financial planning research explains why retirees may find market declines particularly difficult during the sequencing-risk period. Collectively, this research provides the foundation for Behavioural Survivability. This paper builds on that evidence by asking the next practical question: what does prudent retirement stewardship require?

Author / Organisation	Contribution	Relevance
Kahneman & Tversky (1979)	Prospect Theory and loss aversion.	Explains why losses are experienced more intensely than equivalent gains.
Benartzi & Thaler (1995)	Myopic Loss Aversion.	Frequent observation of losses may encourage reactive investment decisions.
William Bengen (1994)	Sequence of returns risk.	Demonstrated why poor early retirement returns can permanently impair outcomes.
Wade Pfau	Retirement sustainability research.	Extended understanding of retirement risk and portfolio sustainability.
David Blanchett	Retirement spending behaviour.	Demonstrated that uncertainty influences retiree confidence and spending decisions.
Ray Dalio (Understanding the Big Debt Cycle)	Recovery paths are prolonged and uneven.	Reinforces that investors experience recoveries through repeated advances and setbacks rather than a smooth progression.

Large market declines and recoveries

The previous paper in this educational series demonstrated that major market recoveries vary considerably in duration. Some recover within months. Others require many years to regain their previous peak.

The following history of United States share market declines greater than 20 per cent illustrates the range of recovery experiences.

United States Share Market Falls Greater Than 20 Per Cent

Decline began	Market bottom	Fall	Days to bottom	Recovery date	Days from bottom to recovery	Total peak-to-recovery journey
2 Aug 1956	22 Oct 1957	-21.5%	446	24 Sep 1958	337	783 days
12 Dec 1961	26 Jun 1962	-28.0%	196	3 Sep 1963	434	630 days
9 Feb 1966	7 Oct 1966	-22.2%	240	27 Jul 1967	293	533 days
29 Nov 1968	26 May 1970	-36.1%	543	6 Mar 1972	650	1,193 days
11 Jan 1973	3 Oct 1974	-48.2%	630	17 Jul 1980	2,114	2,744 days
28 Nov 1980	12 Aug 1982	-27.1%	622	3 Nov 1982	83	705 days
25 Aug 1987	4 Dec 1987	-33.5%	101	26 Jul 1989	600	701 days
24 Mar 2000	9 Oct 2002	-49.1%	929	30 May 2007	1,694	2,623 days
9 Oct 2007	9 Mar 2009	-56.8%	517	28 Mar 2013	1,480	1,997 days
19 Feb 2020	23 Mar 2020	-33.9%	33	18 Aug 2020	148	181 days
3 Jan 2022	30 Sep 2022	-25.2%	270	19 Jan 2024	476	746 days

Source: Gyrostat analysis of historical United States market index data. Recovery is measured as the index returning to its previous peak.

Historical recovery periods have ranged from approximately six months following the 2020 decline to more than seven years following the 1973–1974 bear market.

At the beginning of a market decline, however, neither advisers nor investors know which historical recovery path the future will resemble. Recovery duration is therefore uncertain.

Path of returns

Recovery duration, however, tells only part of the retirement story.

Traditional market analysis records the date on which a previous market peak is eventually regained. Retirement investors experience something quite different. They experience every rally, every setback and every period of uncertainty along the way.

The market records the eventual recovery. The retiree experiences the path of returns.

Major recoveries rarely unfold in a straight line. They often include repeated advances, reversals and prolonged periods of uncertainty while retirement withdrawals continue.

To illustrate this lived experience, the following case study examines the recovery following the 1973–1980 United States bear market.

Case study — The path of returns: 1973–1980 United States bear market

Traditional market analysis usually describes a major decline using three measures:

- Peak-to-trough decline.
- Time to the market bottom.
- Time required to regain the previous market peak.

These measures describe how long recovery required. They do not describe how recovery was experienced.

To illustrate that experience, this article introduces one additional observation: the number of meaningful upward and downward market resets experienced before the previous peak was finally regained.

Table 1 — 1973–1980 recovery journey

Metric	Observation
Peak-to-trough decline	-48.2%
Days from peak to trough (11 Jan 1973 to 3 Oct 1974)	630
Days to regain previous peak (3 Oct 1974 to 17 Jul 1980)	2,114
Meaningful upward resets (approximately +10%)	10
Meaningful downward resets (approximately -10%)	8

Reset methodology: Starting from the market trough, each subsequent movement of approximately 10 per cent or more — either upward or downward — is recorded from the most recent reset level until the previous market peak is regained. The objective is not to create a new market statistic. It is to provide a practical way of illustrating the behavioural journey experienced during prolonged market recoveries.

The market ultimately required approximately **7.5 years** to regain its previous high.

That statistic alone, however, conceals the journey investors experienced.

During the recovery, the market experienced approximately 10 meaningful upward resets and 8 meaningful downward resets before the previous peak was finally regained. Each upward reset increased confidence that recovery was becoming established. Each subsequent downward reset challenged that confidence. For retirees continuing to withdraw capital throughout the period, recovery was not experienced as a single upward journey. It was experienced as a repeated sequence of progress, setback and renewed uncertainty.

For retirees continuing to draw income throughout the period, recovery was experienced not as a single event, but as a repeated sequence of uncertainty, reassessment and renewed decision-making.

Behavioural Survivability is therefore tested throughout the path of returns, not simply at the market trough.

Retirement changes the risk-management mechanism

During accumulation, regular contributions and dollar-cost averaging provide a natural mechanism for investing through market declines. Employment income, ongoing savings and time all contribute to an investor's capacity to recover.

Retirement fundamentally changes that mechanism. Contributions generally cease and withdrawals begin. Rather than purchasing additional assets during market declines, retirees may need to draw income while portfolio values are depressed.

The primary mechanism of risk management therefore shifts from relying on future contributions to intentionally constructing the portfolio before market declines occur.

That may include liquidity, retirement income, diversification, risk controls and embedded protection designed to reduce dependence on favourable market conditions.

Cash provides time, not confidence

Cash reserves are an important component of retirement portfolio construction. They provide liquidity, reduce the need to sell growth assets during periods of market weakness and allow time for markets to recover.

Liquidity, however, is only part of the retirement challenge.

A retiree may hold two years of planned spending in cash while the remainder of the portfolio falls by 25 or 30 per cent. The immediate spending requirement has been addressed, but the uncertainty surrounding the remaining retirement capital remains.

Cash cannot determine how long recovery will take. Nor can it remove concern about whether the remaining portfolio will continue to support retirement.

The distinction is simple:

Cash can fund retirement spending. It cannot by itself preserve retirement confidence.

Liquidity and confidence are different retirement objectives. A resilient retirement strategy should intentionally address both.

Behavioural survivability is established before the decline

Behavioural finance explains why investors may find prolonged market recoveries difficult. Behavioural Survivability considers how retirement portfolios should respond.

The objective is not simply to reassure clients that market volatility is normal. It is to construct portfolios that help clients remain financially and emotionally invested throughout uncertain recovery periods.

Preparation therefore begins before markets decline.

When every major component of a retirement portfolio falls simultaneously, investors are asked to rely almost entirely on patience and confidence in eventual recovery. When part of the portfolio has been intentionally designed to perform a defensive or resilience function during periods of market stress, the retirement strategy can continue to operate as planned.

Behavioural Survivability is therefore established before a market decline occurs, not during one.

Behavioural survivability as retirement stewardship

Behavioural finance explains why investors may struggle during prolonged market recoveries. Retirement research explains why poor decisions during the sequencing-risk period can have lasting consequences.

Retirement Portfolio Resilience considers the portfolio-construction response.

Growth remains essential. Defensive assets remain essential. Retirement income remains essential. Behavioural Survivability complements these functions by helping investors remain financially and emotionally invested while market outcomes and recovery periods remain uncertain.

Its objective is not to eliminate volatility or remove all uncertainty. It is to reduce unnecessary dependence on favourable market timing, rapid recoveries and perfect investor behaviour.

Retirement Portfolio Resilience

Sequence of returns risk defines the retirement challenge. Behavioural Survivability addresses the lived experience of that challenge. Retirement Portfolio Resilience considers the portfolio-construction response.

Its objective is not to predict when markets will fall, how far they will decline or how long recovery will take. Rather, it seeks to reduce dependence on favourable answers to those questions.

A resilient retirement portfolio should intentionally perform four complementary functions.

Retirement Portfolio Function	Purpose
Growth allocation	Long-term capital appreciation.
Defensive allocation	Stability and liquidity.
Retirement Income function	Sustainable retirement income.
Retirement Portfolio Resilience function	Address sequencing risk and Behavioural Survivability.

These functions are complementary rather than competing. Growth remains essential. Defensive assets remain essential. Retirement income remains essential. Retirement Portfolio Resilience complements these functions by helping investors remain financially and emotionally invested throughout uncertain market environments.

A practical framework for advisers

A practical starting point is to consider whether each essential retirement portfolio function has been intentionally addressed.

Retirement Portfolio Checklist

- ☑ Growth Allocation
- ☑ Defensive Allocation
- ☑ Retirement Income Function
- ☑ Retirement Portfolio Resilience Function

This checklist is not intended to prescribe particular investment strategies; it encourages advisers to consider whether each complementary function required for resilient retirement outcomes has been intentionally incorporated into the overall portfolio.

Retirement Portfolio Resilience Framework

Retirement Portfolio Resilience is built upon five complementary pillars that together seek to help investors remain financially and emotionally invested throughout their retirement journey.

- Sequencing-Risk Awareness
- Behavioural Survivability
- Risk-Pricing Discipline
- Retirement Portfolio Construction
- Resilience Across Market Environments

This paper has examined Behavioural Survivability by exploring the lived experience of prolonged market recoveries and the importance of preparing retirement portfolios before major market declines occur.

Conclusion

Behavioural Survivability reframes the retirement conversation away from behavioural biases in isolation and toward the lived experience of prolonged market recoveries. Sequence of returns risk defines the mathematics of the retirement challenge; Behavioural Survivability defines how that challenge is felt by investors drawing income throughout an uncertain recovery.

As retirement advice continues to evolve, advisers may increasingly ask not only how a portfolio is allocated, but whether it has been intentionally designed to help clients endure the full path of decline and recovery, not just the eventual destination.

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Educational series

This paper forms part of the Retirement Portfolio Resilience educational series.

Educational Paper	Primary Focus
☑ Dynamic Hedging and Retirement Portfolio Resilience	Institutional risk management and Risk-Pricing Discipline
☑ Sequence of Returns Risk and Retirement Portfolio Resilience	Sequencing-Risk Awareness
☑ Behavioural Survivability and Retirement Portfolio Resilience	Behavioural Survivability
☑ Retirement Portfolio Construction: Pairing Growth with Retirement Portfolio Resilience	Retirement Portfolio Construction and Resilience Across Market Environments

Together, these papers progressively build the evidence base and practical application of Retirement Portfolio Resilience as a framework for the prudent stewardship of retirement capital.

Each paper examines one dimension of retirement investing before integrating the concepts into the broader Retirement Portfolio Resilience framework.

Educational Progression

Institutional Risk Management

↓

Sequence-of-Returns Risk

↓

Behavioural Survivability

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Integrated Retirement Portfolio Construction

For further information about the Retirement Portfolio Resilience Framework, including supporting research, educational resources and the complete publication series, visit: https://www.gyrostat.com.au/2026-05-29-Retirement-Portfolio-Resilience-Framework-Final.pdf

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