

ANALYSIS: Learning the lessons of history to put sequence risk in its place

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Discussions of sequence or series risk regularly appear in the specialist financial media, and are increasingly appearing in the general press. In simple terms, fear of sequence risk drives investors to take equity and risky asset exposures out of their retirement portfolios.

More specifically, sequence risk is the fear that a series of bad returns in the early stages of retirement drawdown will significantly diminish capital values such that the portfolio is incapable of recovery, can't support future drawdowns and will not meet its investor's longer term needs.

Analysis of Australian historical data suggests that sequence risk for retirees may not be the danger claimed. If this is true, then many of the standard approaches to investment within retirement plans are flawed. Specifically, this includes notions of decreasing growth asset exposure with age and deferring home equity release opportunities to later stages of retirement.

The data suggests that the real culprit here is the investor withdrawing too much from the portfolio. Or simply the portfolio didn't have the capacity to sustain a higher withdrawal rate than around 3 per cent per annum.

History actually shows that there are good arguments for increasing growth asset exposure around retirement. We show that this is consistent with the data from three countries: Australia, the UK and the US.

Background

For the last ten years, FinaMetrica has provided advisers in nine countries with 40-plus years of performance histories for a wide range of portfolio asset mixes for both lump sum investments and regular savings from an investor's perspective. Our goal was to assist financial advisers in the framing of their clients' investment expectations.

Many of our subscribers have told us that their clients weren't surprised by portfolio volatility caused by the market turmoil of 2008 so we know that our explanations have been effective.

As a side perspective, the view that international markets are correlated is confirmed by our data. Despite the different home country biases resulting in differing international portfolio exposures in Australia, the UK and the US, the historical returns are surprisingly consistent, even after taking into account inflation in each country.

This is of itself quite remarkable as the methods of assessing and reporting inflation are quite different in each country.

In the UK, the rolling ten-year real return for a 40 per cent growth portfolio over the last 40-plus years has been 5.5 per cent p.a. (see Note 1), in the US 5.5 per cent (see Note 2) and Australia 5.9 per cent (see Note 3).

What would have happened if a higher growth asset exposure had been selected? Not as much as might be expected. An 80 per cent UK growth portfolio would have delivered 0.9 per cent p.a. more at 6.4 per cent p.a. In the US 6.9 per cent p.a., a 1.4 per cent increment; and in Australia 7.1 per cent p.a., a 1.2 per cent p.a. increment.

Our data set is based on mainstream accumulation indexes, rebalancing each year. So on face value there has been little additional return for the greater exposure to growth assets and the volatility associated with that exposure.

Australian history shows counter intuitive outcomes

The common view is that retirees need a lower exposure to growth assets in retirement than in their accumulation period. On face value, this would seem to be sensible. While the returns are lower, so too should be volatility.

In our example for 40 per cent growth portfolio, we drawdown \$3,000 p.a., \$5,000 p.a. and \$7,000 p.a., adjusted for inflation each year from a \$100,000 portfolio. There is no allowance for fees, taxes or other frictions which can amount to 200 bps (2.0 per cent) or more each year. The real balances after ten years are shown in the main body of the table.

	After 10 years		
	Real End Value of \$100,000		
HISTORICAL	3%	5%	7%
Best	227,696	195,809	163,922
Good	207,996	175,609	143,652
Average	141,818	114,098	83,378
Poor	67,300	42,524	17,747
Worst	47,030	26,972	5,867

Best and the Worst balances are exactly as labeled. They are the extreme outcomes. The Good means a result that was higher than 95 per cent of the results and, similarly, the term Poor means a result that was higher than only 5 per cent of the results. The Average is the average return.

At this stage of the argument we can discount the Best and the Good as we shouldn't be over emphasising high returns to investors. It's the Average, Poor and Worst outcomes that need to be explored by advisers and details shared with clients.

The account balances alone don't provide any easy insight into the future so we looked to reinterpret the data consistent with the number of future years the real income might continue to be withdrawn at the end of the tenth year.

We can divide the closing 'real' balances for future annual payments by \$3000, \$5000 and \$7000 and see the future year payments.

	Real End Value as a multiple of the real annual drawdown		
Withdrawal rate	3%	5%	7%
Best	75.9	39.2	23.4
Good	69.3	35.1	20.5
Average	47.3	22.8	12.3
Poor	22.4	8.5	2.8
Worst	15.7	5.4	0.8

We now have a framework for comparing retirement benefits based on future payments.

– After 10 years our \$3000 p.a. withdrawing investor had on average 47.3 more years' payments. In the Poor case (5 per cent) she had 22.4 more years. And the very Worst 15.7 more years.

– After 10 years our \$7000 pa withdrawing investor had on average 12.3 more years' payments. In

the poor case (5 per cent) she had 2.8 years. And the very Worst 0.8 more years.

How does this compare to the client who took on the additional 40 per cent risky asset exposure and ran with an 80 per cent Growth asset portfolio? We already know that the additional return was 1.2 per cent p.a. over the last 40-plus years. Averages can hide all sorts of unexpected insights.

Withdrawal rate	Real End Value as a multiple of the real annual drawdown		
	3%	5%	7%
Best	111.4	56.3	32.6
Good	81.1	41.9	25.1
Average	54.3	26.7	14.8
Poor	26.2	10.5	3.4
Worst	16.1	5.4	0.6

- Best, Good and Average returns are generally consistent with what most would expect. The additional growth asset exposure delivers better returns, much better than might have been expected considering the annualised incremental return was only 1.2 per cent p.a. greater.
- The Poor and Worst returns are another matter. They are counter intuitive. Investors didn't necessarily have a lower return for lower growth asset exposure.
- Investors were not significantly worse off for taking the 40 per cent higher exposure to growth assets.

But why did those with higher exposure not have much worse 'poor' and 'worst' outcomes?

We believe this is because over any 10-year period, markets have generally recovered from their falls and portfolios with higher exposure to growth assets have more fully participated in that recovery.

In other words, the added return from the higher equity exposure 'paid' for the additional non-crystallised loss.

Comparison of Australia with the UK and US

Is this an Australian aberration? How does this compare to similarly exposed portfolios in the UK and US?

Real account balances after ten years on a \$/£100,000 initial investment with three real drawdown rates; three countries, 40 per cent growth											
US 40%	3%p.a. real	5%p.a. real	7%p.a. real	AUS 40%	3%p.a. real	5%p.a. real	7%p.a. real	UK 40%	3%p.a. real	5%p.a. real	7%p.a. real
Best	82.8	43.1	26.2	Best	75.9	39.2	23.4	Best	79.3	41.7	25.6
Good	70.0	36.0	21.2	Good	69.3	35.1	20.5	Good	72.0	36.9	22.2
Ave	45.3	21.7	11.6	Ave	47.3	22.8	12.3	Ave	45.4	21.8	11.6
Poor	23.0	9.0	3.0	Poor	22.4	8.5	2.5	Poor	19.2	7.7	2.7
Worst	17.1	6.7	2.1	Worst	15.7	5.4	0.8	Worst	17.2	6.3	1.6

– The patterns are very similar in both the US and UK to Australia for a 40 per cent exposed portfolio across all five cases.

– Specifically, there's no significant differences in future year payments for portfolios across countries in Poor and Worst cases.

– A 3 per cent withdrawal rate leaves investors with potential additional payments after 10 years for

a further 19.2 years in UK, 23.0 years in US and 22.4 years in Australia in Poor cases.

So was there any significant difference in the outcomes from an 80 per cent growth asset exposed portfolio?

Real account balances after ten years on a \$/£100,000 initial investment with three real drawdown rates;three countries,80 per cent growth											
US 80%	3%p.a. real	5%p.a. real	7%p.a. real	AUS 80%	3%p.a. real	5%p.a. real	7%p.a. real	UK 80%	3%p.a. real	5%p.a. real	7%p.a. real
Best	108.4	58.3	36.8	Best	111.4	56.3	32.6	Best	109.3	56.9	34.5
Good	86.6	44.5	27.2	Good	81.1	41.9	25.1	Good	88.6	46.6	28.8
Ave	54.0	26.4	14.6	Ave	54.3	26.7	14.8	Ave	51.7	25.2	13.8
Poor	19.5	7.7	2.4	Poor	26.2	10.5	3.4	Poor	20.1	8.0	2.6
Worst	16.1	6.0	1.3	Worst	16.1	5.4	0.6	Worst	16.6	5.5	0.4

- The patterns are very similar to the 40 per cent growth asset portfolio, once again, in both the US and UK to an 80 per cent exposed portfolio.
- Specifically, there's no significant difference in future year payments for portfolios across countries in Poor and Worst cases.
- A 5 per cent withdrawal rate leaves investors with potential additional payments after 10 years for a further 20.1 years in UK, 19.5 years in US and 26.2 years in Australia in Poor cases. The Worst cases are also consistent.

So, at least historically, sequence risk looks to be an unnecessary anxiety. It seems to be a case of focusing on one particular part of the portfolio performance data rather than the full context.

Reducing equity exposure hasn't changed the Poor and Worst returns in any meaningful way but will have likely impacted Average, Good and Best returns.

The real driver of poor outcomes was the size of the regular withdrawal not the equity exposure. In summary, the opportunity cost of being underexposed to growth assets was high. Investors who did so most likely had a diminished retirement lifestyle.

So what's the take-away?

- There may be no investment need to reduce growth asset exposures in portfolios around retirement. In fact, there may be an argument to increase it.
- The best retirement portfolio may be the one that best matches the investors' financial risk tolerance with assets. On that basis they are less likely to be carried away by stock and property market movements.
- Control spending, the markets will look after the portfolio
- Our 17 years collection of 800,000 risk tolerance test reports shows that there's little likelihood of material change to an individual's risk tolerance as they age. What changes is their perception of risk as markets move and other factors change.
- The role of annuities in an individual's retirement portfolio needs to be carefully considered.
- Short-term cash flow needs may be best financed by low cost borrowings, through a reverse mortgage for instance. And repaid when equity markets recover.
- When markets are in disarray investors may choose to spend less.

Retirement planning has never been so challenging.

Notes:

Note 1: Average real annualised 10 year rolling return (1970 to 2014). The analysis was done on a monthly basis for an asset allocation comprising 35 per cent Fixed Interest, 25 per cent International Fixed Interest, 25 per cent UK Equities and 15 per cent International Equities. Total return indices were used as proxies for asset sector performance. No allowance was made for tax or fees. The asset allocation was rebalanced annually.

Note 2: Average real annualised 10 year rolling return (1972 to 2014). The analysis was done on a monthly basis for an asset allocation comprising 10 per cent Cash, 50 per cent Fixed Interest, 25 per cent USA Equities and 15 per cent International Equities. Total return indices were used as proxies for asset sector performance. No allowance was made for tax or fees. The asset allocation was rebalanced annually.

Note 3: Average real annualised 10 year rolling return (1972 to 2014). The analysis was done on a monthly basis for an asset allocation comprising 25 per cent Cash, 35 per cent Fixed Interest, 20 per cent Australian Equities, 15 per cent International Equities and 5 per cent Property. Total return indices were used as proxies for asset sector performance. No allowance was made for tax or fees. The asset allocation was rebalanced annually.



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Paul Resnik is a co-founder of FinaMetrica, which provides best-practice psychometric risk tolerance testing tools and investment suitability methodologies to financial advisers in 23 countries. Resnik has been in the financial services industry for more than 40 years. He has founded financial planning, asset management, life insurance, consulting, recruitment, conference, wrap and financial planning software businesses. He has a detailed understanding of the financial services industry supply chain and personal financial planning. Peter Worcester has spent nearly 40 years working in the financial services industry. He is an actuary, has been a director of several financial planning firms, and has been an investment manager with several firms. He was a key witness for the Joint Parliamentary Committee investigation into Storm Financial. He is committed to continual improvement in investment outcomes for clients.