Colonial First State

Sequencing risk

Behavioural investing series #6

Most people understand that volatility in financial markets can affect the value of their investments. In this paper, we look at how volatility affects investors at different stages of their lifecycle.

For retirees, in particular, it isn't just the annual returns that matter – the order of these returns is also just as important. By taking a closer look at sequencing risk, we will explain how the order of investment returns can have a significant influence on the value of investors' retirement savings.

Does the order of returns really matter?

In reality, the order of investment returns does not matter too much for most long-term investors. While nobody likes to see the value of their investments going down, irrespective of the 'return path' or order of returns, an investment will have risen in value as long as the average return is positive.

This is illustrated in the stylised example in Table 1. Investor A and Investor B invest $1,000,000 in different products – the table highlights how both investments performed over 15 years.

TABLE 1: IMPACT OF THE 'RETURN PATH'

End of year	Annual return	Investor A	Annual return	Investor B
		$1,000,000		$1,000,000
1	-14%	$860,000	26%	$1,260,000
2	-4%	$825,600	23%	$1,549,800
3	-22%	$643,968	19%	$1,844,262
4	15%	$740,563	-5%	$1,752,049
5	9%	$807,214	8%	$1,892,213
6	-7%	$750,709	-2%	$1,854,369
7	-14%	$645,610	12%	$2,076,893
8	5%	$677,890	5%	$2,180,737
9	12%	$759,237	-14%	$1,875,434
10	-2%	$744,052	-7%	$1,744,154
11	8%	$803,576	9%	$1,901,128
12	-5%	$763,398	15%	$2,186,297
13	19%	$908,443	-22%	$1,705,311
14	23%	$1,117,385	-4%	$1,637,099
15	26%	$1,407,905	-14%	$1,407,905

Source: First State Investments. Table is used for illustrative purposes only.

Both investments deliver the same returns, but the order of those returns is reversed for the two investors. Investor A's investment delivers three consecutive years of negative returns early in the period, while Investor B's investment delivers negative returns at the end of the period.

Assuming both investors stay invested for the full 15 years, it is clear that the order of returns had no impact on their final investment balance – both investments have grown to $1,407,905. This is because positive and negative market movements have averaged out over time. Importantly, despite the volatility in annual returns, the average return is positive.

For this reason, most people saving for their retirement should not be overly concerned about short-term volatility in markets, even though this can result in short-term downward movements in the value of their investment. Assuming that the long-term average return is positive, the value of their investment will grow.

Does anybody need to be concerned with volatility then?

One group of investors in particular needs to think about volatility and the order of their investment returns – retirees. The following example illustrates how the order of returns affects them. Let's assume Investor C and Investor D are both 65 years old and about to retire. In order to help finance their day-to-day living costs, both investors withdraw $5,000 each month, or $60,000 per year, from their investment.

TABLE 2: IMPACT OF THE 'RETURN PATH' WITH REGULAR WITHDRAWALS

End of year	Annual return	Withdrawal	Investor C	Annual return	Withdrawal	Investor D
			$1,000,000			$1,000,000
1	-14%	$60,000	$800,000	26%	$60,000	$1,200,000
2	-4%	$60,000	$708,000	23%	$60,000	$1,416,000
3	-22%	$60,000	$492,240	19%	$60,000	$1,625,040
4	15%	$60,000	$506,076	-5%	$60,000	$1,483,788
5	9%	$60,000	$491,623	8%	$60,000	$1,542,491
6	-7%	$60,000	$397,209	-2%	$60,000	$1,451,641
7	-14%	$60,000	$281,600	12%	$60,000	$1,565,838
8	5%	$60,000	$235,680	5%	$60,000	$1,584,130
9	12%	$60,000	$203,962	-14%	$60,000	$1,302,352
10	-2%	$60,000	$139,882	-7%	$60,000	$1,151,187
11	8%	$60,000	$91,073	9%	$60,000	$1,194,794
12	-5%	$60,000	$26,519	15%	$60,000	$1,314,013
13	19%	$60,000	$0	-22%	$60,000	$964,930
14	23%	$60,000	$0	-4%	$60,000	$866,333
15	26%	$60,000	$0	-14%	$60,000	$685,046

Source: First State Investments. Table is used for illustrative purposes only.

Again, the two different investments deliver the same percentage returns, but the ordering of the returns is reversed.

The investment outcomes of Investor C and Investor D highlight how sequencing risk (or the order of investment returns) can be crucially important around retirement age. At this time, investors are typically making the transition from savers to income-seekers – from building up their nest egg to drawing income from it. If financial markets struggle around the time of retirement, there could be undesired consequences such as delaying retirement to continue working, or having to reduce expenditure in retirement.

This is the clear problem for Investor C. Regular withdrawals, combined with a series of negative investment returns in the first three years of retirement, mean Investor C has less time to recover from negative market movements. In the above example, Investor C faces the unfortunate prospect of having their funds depleted just 12 years into retirement.

Over the same period, Investor D continued to accumulate wealth during retirement despite making exactly the same withdrawals as Investor C. This is because Investor D had the better fortune of having three consecutive years of positive, double-digit returns immediately after retirement.

What can you do about sequencing risk?

The rapidly declining value of Investor C's investment shows that sequencing risk can have serious implications for retirees. Importantly, it can make a meaningful difference to how long an investor's savings will last in retirement and how much income can be withdrawn in order to help fund day-to-day living costs.

As a result, sequencing risk must be addressed before savers reach retirement as part of a transition strategy.

One thing is for sure – volatility will remain a feature of financial markets. While nobody can control the order of investment returns, there are some steps investors can take to mitigate the effects of sequencing risk.

Mitigating the effects of sequencing risk

- **Diversifying** your investments across different asset classes can reduce the volatility of investment returns and reduce the severity of downward movements in individual asset classes. It's important to remember that diversification can reduce the volatility of investment returns without inhibiting total returns.
- **Amending** asset allocation in your investments over your working life. Many investors choose to have greater exposure to growth assets early in their working life and then reinvest their assets in more defensive, less volatile investments as they approach retirement.
- **Adjusting** the rate of savings during your working life. It may be worthwhile having a higher contribution rate early in your working life (when income is typically lower) and reducing the rate as you approach retirement (when income is typically higher).

Speak to your financial adviser if you have any questions about sequencing risk.

Want more information?

Please speak with your financial adviser or visit our website at colonialfirststate.com.au
Alternatively you can contact us on 13 13 36.

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