

## Loss aversion, "FoMo", anxiety and mistiming

Douglas

Isles | [https://www.portfolioconstruction.com.au/obj/articles\\_perspectives/PortfolioConstruction-](https://www.portfolioconstruction.com.au/obj/articles_perspectives/PortfolioConstruction-Forum_Platinum_Loss-aversion-FoMo-anxiety-and-mistiming.pdf)

Platinum

Forum\_Platinum\_Loss-aversion-FoMo-anxiety-and-mistiming.pdf

Asset

Management

| 10

February

2017



(/summit/)

This paper aims to demonstrate four common behavioural problems which make the journey of investing particularly challenging for many investors and meeting their retirement goals.

### A DEFINITIONAL OVERVIEW

#### Loss aversion

The work of psychologists Kahneman and Tversky demonstrated that losses are felt far more acutely than gains. Indeed, their work has shown that loss aversion is very common. As a result, with investors feeling a greater impact from losses psychologically, it can often feel like "one step forward and two steps back".

#### Fear of missing out (or, as it is now fashionably abbreviated, "FoMo")

The author's key conjecture (based on conversations with hundreds of financial advisers and many investment researchers) is that in a world where returns are compared to a benchmark, some investors treat this opportunity cost as a "loss". It may be that this phenomenon is more relevant to professional investors than retail investors. When one examines the data on fund flows to particular managers, there is a significant body of evidence pointing to this behaviour.

#### Anxiety

Given the two observations above, a tendency to check returns more frequently leads to a higher probability of encountering negative news. Equity markets rarely fall. The same is true for the track record of long-term outperformance by the best fund managers in the industry. Luck is a key driver in the short-term where individual transient events can have an exaggerated impact on performance outcomes.

#### Mistiming

Investors have a tendency, in aggregate, to chase assets that have performed well. From experience running a fund management business, the author has a deep understanding of investor psychology – knowing that good companies going through a soft patch can be overlooked and can offer outstanding opportunities.

When these four elements are combined and considered together, it's possible to better understand how investors feel. That can increase the difficulty of making rational decisions. An appropriate solution is to commit to a long-term investment in equities with a manager with an outstanding long-term track record, and to stick to it. The only reasons to change direction should be if the investor's own goals change, or if the fund manager changes its approach.

### A NUMERICAL DEMONSTRATION

The remainder of this paper offers a numerical demonstration of how the above four concepts are applied, to understand their practical effects on investment outcomes.

#### Loss aversion

Firstly, the psychological impact of loss aversion can be quantified by taking a data set of monthly returns and adjusting any months with negative returns to be zero and then compounding that psychological return. For example, an actual monthly return series of +2%, -3%, +4%, -1% and +2% would be replaced by +2%, 0%, +4%, 0% and +2%.

To run this model against the MSCI All Country World Index, the actual compound total annual returns over the 21 Australian financial years from 1996 to 2016 are used. Note that the amplifying effect can be extreme under extreme market conditions. For example, during the period when the Tech Bubble burst, the -38% return during the Global Financial Crisis (GFC) felt as if it had been close to a -68% return.

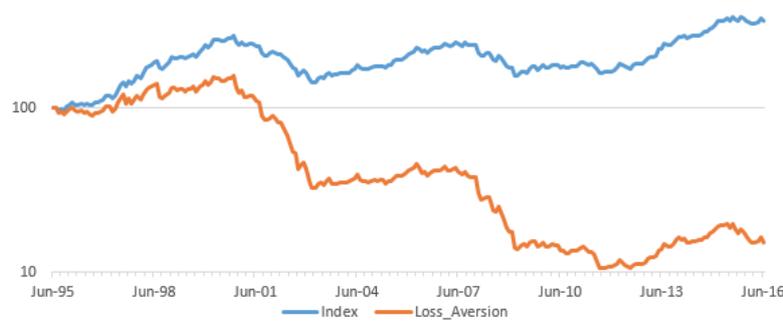
This 21-year period can be charted to visualise the effects of loss aversion on an investor's psychological journey (Figure 1).

Related Articles

Buy Low, Sell High sounds simple but clients need a framework > (/summit/buy-low-sell-high-sounds-simple-but-clients-need-a-framework)

**Figure 1: MSCI AC World Index (\$A)**

Actual total return vs. perceived return adjusted for loss aversion (log scale)



Source: Platinum Asset Management

**Fear of missing out ("FoMo")**

To quantify the effect of FoMo on how investors feel requires another adjustment be applied to a fund's absolute return when its relative aversion adjustment is applied in months of negative absolute returns. For example, in a month where a fund's return is +3% while its benchmark return of +1%. This means that in a month where the fund underperformed the benchmark by 2%, its +3% absolute return feels more like 1%. Compounded over the long-term, the aggregate impact of cognitive biases such as loss aversion and FoMo can be significant, and the addition to loss aversion, a monthly return series will give a perceived return which is generally far less than the actual return over the same period, especially in times of market downturns.

The process required to carry out this analysis for any fund is fairly straightforward:

1. Take the monthly return series of the fund and line it up with its benchmark returns.
2. Adjust the fund's actual returns for the impact of loss aversion by doubling the actual monthly return of any month in which the return is negative.
3. Adjust the fund's actual returns for the impact of FoMo by subtracting the fund's underperformance vis-à-vis the benchmark from its actual return. For example, if the fund returned 4% in a particular month while the index returned 8%, the "FoMo-adjusted return" would be (4% - (8% - 4%)) = 0%.
4. For all months where the fund's absolute return is positive and its relative performance is positive or zero (i.e. it either beat or matched the benchmark), the FoMo-adjusted return is the same as the actual return.

One can then compound up the "FoMo-adjusted" returns and compare them with the fund's actual returns. The results can be quite stark.

To illustrate the startling impact of these cognitive biases, four simulated models were created to show the different psychological reactions to market volatility, and a hypothetical fund outperformance of 3% per annum with 10% volatility. The simulations cover a period of 60 months.

The compound return profiles of the random simulator are shown in Figure 2.

**Figure 2: Fear of missing out simulations – compound returns**

Simulation	Market benchmark return	Fund return	FoMo-adjusted fund return
#1	15.4%	32.6%	14.6%
#2	9.7%	18.0%	1.6%
#3	6.9%	6.2%	-14.9%
#4	7.0%	4.8%	-18.4%

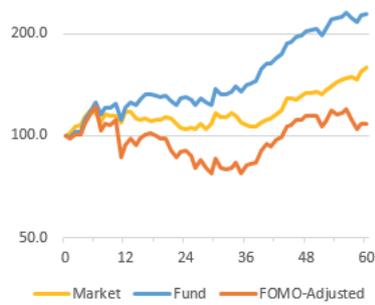
Source: Platinum Asset Management. The models assume a normal market return of 10% per annum for the benchmark with 12% volatility, and loss aversion and FoMo adjustments outlined above.

The following figures give a visual of the simulations.

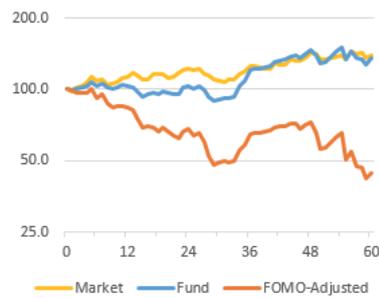
**Figure 3a: Monthly simulation 1**



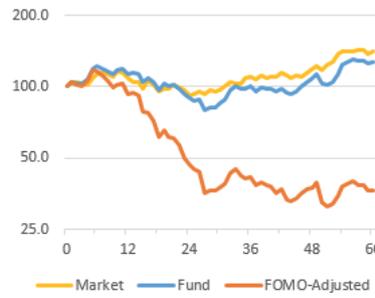
**Figure 3b: Monthly simulation 2**



**Figure 3c: Monthly simulation 3**



**Figure 3d: Monthly simulation 4**



Source: Platinum Asset Management

## Anxiety

Anxiety from "over-checking" can be considered by re-running the exercise on the psychological impact of following a fund's monthly, quarterly and yearly index return series respectively over the 21 Australian financial years to 30 June 2016. The message here is loud and clear. By checking returns only once a year the psychological journey for equity investors improves substantially. But as one sees from the mult

**Figure 4: The more often you check, the more painful the journey**  
(30 Jun 1995 to 30 Jun 2016)

	Checking monthly	Checking quarterly	Checking yearly
MSCI AC World Index (A\$) – Actual compounded annual return	5.9%	5.9%	5.9%
Returns adjusted for loss aversion based on frequency of checking	(8.6%)	(3.2%)	0.1%
Annualised psychological impact of loss aversion based on frequency of checking	(14.5%)	(9.1%)	(5.8%)

Source: Platinum Asset Management. Index return series for 21 Australian financial years to 30 June 2016.

## Mistiming

It is important to emphasise that investors chasing returns do themselves no favours. Investment returns are the key driver of fund mana that, for managers, the cyclical pattern of performance leads to a cycle in the demand for the manager's services that is counter to the b mistiming. Similar outcomes are found when looking at the author's firm's client data. This is one of the most damning observations on t

In tracking flows, a simple algorithm with four parameters has historically been a very good predictor for future flows based on the authr comparison over time. One needs to scale this metric against the specific business scale, market access and other such factors, but the b

The result produced by this algorithm highlights three trends:

1. Allocation to an asset class is driven by recent returns;
2. Within an asset class, the managers that have had top performance over that recent – typically, fairly short – period attract business
3. The time frames are shorter than what one would hope, but are not inconsistent with the short holding periods for individual stocks

The algorithm's cyclicity suggests that being contrarian has tended to be a lucrative approach. It also implies that to ask a manager ab been, in absolute and relative terms".

## WRAPPING UP

The suggestion made earlier – an "invest and forget / wait for harvest time" approach – is to take the timing decision away by entering in

By sharing these four observations and demonstrating the simple mathematics behind them for those with interest, it is hoped that clien

## ENDNOTES

1. Kahneman, D., & Tversky, A. (1979), Prospect Theory: An Analysis of Decision under Risk, *Econometrica*, 47, 263–291.
2. For example, data from Morningstar's fund database over the period from 1997 to March 2016 demonstrate that, in aggregate, 5- and 4-star rated funds, plus new funds (which b
3. Nassim Nicholas Taleb made this telling point in his book *Fooled by Randomness*. Assuming an investment with an annual return of 15% with 10% volatility, Taleb shows that the pr increases with shorter time frames.

Period	Probability of making money	Period	Probability of losing money
Year	93%	Second	49.98%
Quarter	77%	Minute	49.83%
Month	67%	Hour	48.7%
Day	54%	Day	46%
Hour	51.3%	Month	33%
Minute	50.17%	Quarter	23%
Second	50.02%	Year	7%



*Douglas Isles is Investment Specialist with [Platinum Asset Management \(https://www.platinum.com.au/\)](https://www.platinum.com.au/).*

## Join The Debate

**What's your view?** Answer the question and see how your view compares to others.

1. Regarding Invesco's insights:
  - A.  I primarily DISAGREE & don't plan to investigate further
  - B.  I primarily DISAGREE & do plan to investigate further
  - C.  I primarily AGREE & do plan to investigate further
  - D.  I primarily AGREE & don't plan to investigate further

Submit