New Approaches in Behavioural Finance

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“The market can stay irrational longer than you and I can stay solvent.” John Maynard Keynes (attrib.)

- What is behavioural finance?
- What the cognitive psychologists teach us
- Some basic principles
- Investment implications
- Retail investors v. the professionals
- Recent advances in behavioural finance

What is behavioural finance?

- "The application of psychology to the behaviour of financial markets and market participants"

- Behavioural finance vs. traditional finance

- Behavioural finance describes the judgmental biases investors are prone to and their investment consequences

- Understanding its teachings should lead to better (*i.e.*, less biased) decisions

Rational, fundamental thinkers ...

. . . or human beings influenced by emotions?

Basic principles of behavioural finance

- Heuristics and biases
- We use back-of-the envelope calculations or mental shortcuts to simplify complex judgments or decisions

Question 1

- *What is the more likely cause of deaths in the US?*

  (a) by a shark, or

  (b) being hit by aeroplane parts

The availability heuristic

- Likelihood of an event depends on how easily it can be brought to mind, remembered or *imagined*
- Events which are vivid, recent, highlighted by the media or unusual are readily recalled
  - likelihood of such events is *overestimated* and *vice versa*

- Private investor stock selection is driven by "attention grabbing" events
- Mutual fund advertising
- The familiarity bias in investment portfolios

Question 2

"*Linda is thirty-one years old, single, outspoken, and very bright. Her degree was in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in anti-nuclear demonstrations.*"

What is more probable:

(a) Linda works in a bank, *or*
(b) Linda works in a bank and is active in the feminist movement?

The representativeness (similarity) heuristic

- Judgments based on stereotypes
- How representative of, or similar to, is A to B?
  - judgments based on the degree to which A resembles B
- Other factors affecting such judgments are frequently ignored
- WYSIATI

The representativeness heuristic (cont…): some illustrations

- Market reaction to dot.com name changes
- Analyst stock recommendations – the “good management, good stock” syndrome
- The job interview
- Evaluating fund manager performance
  - skill or luck?
- Chartism (technical analysis)

The representativeness heuristic and technical analysis (Kahneman and Tversky, 1974)

- *Insensitivity to sample size* or *law of small numbers*
  - i.e., relying on the representativeness of the event alone

- *Insensitivity to prior information* or *ignoring prior probabilities*
  - "base rate neglect"

- M*isconceptions of chance and randomness* or "*gamblers' fallacy*"
  - expecting chance to be self-correcting or *reading patterns into random events*

The representativeness heuristic and technical analysis (cont…)

- Ignoring *regression towards the mean*
  - people expect extreme performance to be followed by similar extremes

- *Illusion of validity*: confidence in highly fallible judgments is a function of representativeness
  - *e.g.*, the illusion of stock-picking skill (Kahneman, 2011, *Thinking, fast and slow*)

- *Insensitivity to predictability:* ignoring the (lack of) reliability of the evidence
  - *e.g*., the continuing reliance on the selection interview despite its lack of any predictive ability

Question 3

The Dow Jones Industrial Average (DJIA) began in 1896 at a value of 41 and by the end of 2013 it had reached 16,577. However it is a capital index and excludes dividends. What would it have been by the end of 2013 if dividends had been included?

(a) < 25,000, (b) 25,000 – 100,000,

(c) 100,000 – 500,000, (d) 500,000 – 1,000,000, *or* (e) > 1,000,000

Anchoring and adjustment

- An initial value is adjusted $\Rightarrow$ final assessment
  – budget process
  – analyst earnings forecasts
  – P/E adjustments for risk, use of previous share price high/low, industry average P/E benchmark

- *Insufficient adjustment:* people are typically *conservative,* they *underreact* to new information

- Overly narrow confidence bands (intervals) (also an aspect of *overoptimism* bias)
  – *people anchor on an initial value then adjust for upper and lower limits*

The affect heuristic

- Key role of liking (goodness/badness) in all decision making
- Decisions based primarily on intuition, instinct and gut feeling
  - what “feels” right
- Some illustrations:
  - private investor stock selection decisions
  - importance of management meetings
  - analyst stock recommendations
  - M&A deals
  - major capital investment decisions

In "love" with the stocks we hold?

"Careful pal, you're talking about the stocks I love."

Question 4

Suppose you are offered a bet on the toss of a fair coin. If the coin comes up tails you have to pay £100. What is the minimum sum you would need to win if heads comes up to make you want to play?

Aversion to loss (prospect theory)

- “Losses loom larger than gains”
  - a loss typically has about *two and a half times* the impact of a gain of the same magnitude
  - people hate to lose!
  - the “*get-evenitis*” disease

- Investors are generally predisposed to *sell* their winners too soon but *hold* on to their losers too long – the *disposition effect*
  - *prior losses are sunk costs and should be ignored*

- The need for formal sell disciplines

- The ability to tolerate loss is key to all investing

- Market underreaction to bad news: a key anomaly

Can you identify successful fund managers in advance?

- The extraordinary performance of Warren Buffet’s Berkshire Hathaway:
  - $18/share in May, 1965, $159,145/share April 16 2013
  - annualised return 20.8%% v 6.3% on the S&P 500
- But did you know of his abilities in foresight or only in hindsight?

Hindsight bias – the “I-knew-it-all-along” effect

- “Inability to go back in time” once outcome is known
- Outcome awareness increases our belief the event was inevitable in *foresight*
- (Other people’s) past decisions may look wrong, although appropriate given the information available at the time
- We tend to overwrite previously stored memories in our brain so making it difficult to reconstruct past experiences
  – resistant to learning from and correcting

Self-attribution bias

- Successful outcomes (investments) are attributed to skill and unsuccessful outcomes to bad luck or outside events
- CEOs, fund managers and investment analysts very prone
- The ‘lucky fool’ syndrome among market traders (Taleb, *Fooled by Randomness*) – attributing skill to randomness
- “Don’t confuse brains with a bull market”

Confirmation bias

- We see what we want to see and interpret evidence in terms of preconceived notions
- We search for evidence consistent with previously held views and neglect potentially disconfirming information
- Consensus becomes confirmatory evidence
- Need to search for disconfirming evidence to get the real story!
- "*Groupthink*" (Janis, 1982) (or *basic assumption group* collusive thinking)
- "Knowing" but not knowing
  - "turning the blind eye"

Overconfidence

- We systematically overestimate our decision making abilities

- The more confident we are:
  - the greater the level of skill required and the more difficult the task (*illusion of omnipotence*)
  - the more information we have (the *illusion of knowledge*)
  - the more time spent in analysis and the longer the run of prior successful outcomes (*illusion of control)*

- Unfortunately, actual performance often has little or no relationship with confidence

Overoptimism

- People are often excessively optimistic in predicting the outcomes of desired events
- We believe what we want to believe will happen
- The BoE Monetary Forecasting Committee
  - 2010 UK GDP forecast for 2013 7% higher and inflation 4% lower
  - blamed on bad luck
  - also overconfident?
- Analyst stock recommendations and price forecasts?

Retail investor psychology

- retail investors are very good at losing money
- Private investors trade excessively
  - the more they trade the more they lose!
- Individual investors *can* distinguish between good and bad stocks, but they get the relationship wrong
  - stocks they *buy* subsequently *fall*
  - stocks they *sell* subsequently *go up*
- Men lose more than women
  - single men lose the most!

Retail investor psychology: why they underperform

- Retail investors are sensation seeking
  - investing or speculating?
  - gambling or excitement?
  - like *lottery-type* stocks

- Rely on charts, intuition and stock tipster websites not fundamental analysis

- Prone to “attention grabbing” investing

- Prone to the familiarity bias
  - *e.g.*, investing in own firm and local stocks

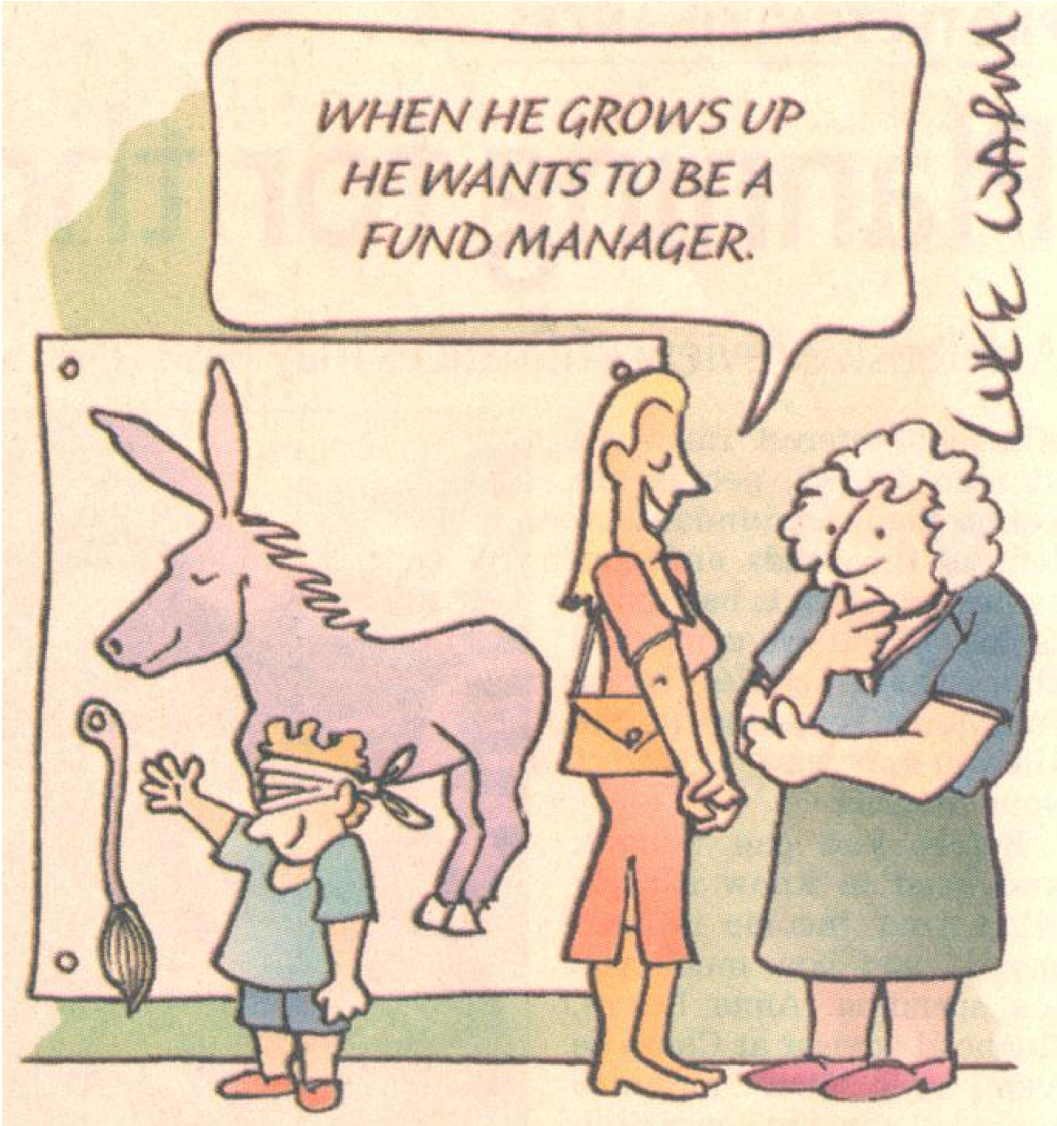
- Reluctant to realise losses

Are professional fund managers prone to similar behavioural biases?

- Professional fund managers *do* have stock-picking skills and are *less* prone to bias
- Funds significantly outperform the market *before costs*
- However, the average mutual fund significantly underperforms the index *after costs*
- Very difficult to distinguish skill from luck
- Little evidence past performance can predict future performance
  - “The year-to-year correlation between mutual fund outcomes is … barely higher than zero” (Kahneman, *Thinking, fast and slow*, 2011)

Are fund managers overconfident?

- While *knowing* active management reduces returns, they *believe* their own abilities to manage are above average
- The *illusion of validity* (Kahneman, 2011)
  - very bright and well trained managers exercise a high level of skill in evaluating business prospects but is this already in the market price?
  - supported by a powerful professional culture
- The cult of the “superstar” manager
  - real skill or have they just been lucky?



Source: *Financial Times*

The *real* role of the fund manager?

- Relevant market index benchmark or retail investor performance?
  - the fund manager provides proper diversification
  - trade-off between downside protection and upside potential
- The (neglected) psychological role of the fund manager?
  - to provide comfort and understanding in an anxiety-driven environment ("broad" shoulders)?
  - to offer the chance to outperform (and feel good) at low risk
  - passive funds are unexciting and "boring"
- Meir Statman's "expressive" not just "utilitarian" benefits
- "You can fly a jumbo jet to New York with no pilot but I feel more comfortable with someone in the cockpit." (Andrew Clare, *FT*)

- *Fund management is not just an optimal mean-variance portfolio theory world*

Do behavioural finance strategies work?

- Investors certainly believe in behavioural finance
  - average fund annual net inflows are more than 50% greater than with matched mutual funds *ceteris paribus*

- Raw returns beat index funds by 4.5% per annum and matched mutual funds by 3.6%
  - *but their risk adjusted returns do not differ*

- *Are behavioural funds simply value funds?*

- Are behavioural funds an exercise in marketing or do they really have a real investment edge?

Recent advances in behavioural finance: emotions and investing?

- The need to recognise the key role emotions play in investing
  – Keynes's "animal spirits" in financial markets
- Investors enter into emotional relationships with their assets
  – struggle between the *pleasure principle* and the *reality principle*
  – danger of falling in love with a stock vs. pain of being let down
  – excitement pitted against anxiety
  – the "thrill" of investing
- Emotional consequences of uncertainty?
- Search for "fantastic objects"
  – all assets mentally have the potential to be "magical" (not just dot.com stocks or Bernie Madoff's returns)
- Groupthink in the investment industry
- Not *greed, fear and hope* but *excitement, anxiety and denial*

Takeaways

- Our financial decisions are highly fallible
- Need to recognise the biases to which we are prone
- Awareness can help us “debias” and improve our decision making
  - but can behavioural finance help us “beat the market”?
- Better understanding of the decision errors of others
- Private investors are dangerous to their wealth
- Professionals are less prone to bias
  - although they underperform passive funds they play other very important roles
- Don’t ignore the key role emotions play in investing
- Investors buy behavioural stories

Question

How useful might the teachings of behavioural finance be in your own day-to-day work and, if so, in which ways?