Behavioural Finance

“Behavioural finance...in essence simply recognises that human beings, individually and collectively, behave as humans (having psychological qualities) and not as gas molecules (having only mass and velocity).”


Behavioural Finance

“Behavioural Finance merges psychology and economics. Some say the result is bad psychology and bad economics”

Richard Taffler, February 2007
Efficient Markets Hypothesis (EMH)

- EMH was laid out in Fama (1970) heralded a revolution in finance
- Modern finance, and indeed behavioural finance, would be impossible without EMH
- Initial Empirical tests provided strong support for the EMH
- But over the last 30 years new evidence has revealed predictability inconsistent with EMH

Anomalies

- Market capitalisation (size)
- Fundamental to price (price to book, price to earnings)
- Price and earnings momentum
- Return continuation following public events
- Accrual effect (Sloan 96)

Failings of the EMH

- Agents are not always rational
- Limits to arbitrage
  - Arbitragers may not have the correct time horizons to eradicate inefficiencies (LTCM, Amaranth)
  - Arbitrage is not risk free
The EMH backlash

- Data mining
  - But out of sample testing has proved to show the same anomalies
- Random mistakes with no consistent pattern
  - Consistency over time
- Improper risk measurement (Fama)
  - High sharpe ratios (Hansen and Jagannathan 91)

Key behavioural errors

Many anomalies
Questions
1. Please write down the last four digits of your telephone number.
2. Is the number of doctors in London higher or lower than this number?
3. What is your best guess of the number of doctors in London?

More questions…
4. A health survey was conducted in a sample of adult males in New Jersey, of all ages and occupations. Please give your best estimate of the following values:
   - What percentage of the men surveyed have had one or more heart attacks?
   - What percentage of men surveyed are both over 55 and have had one of more heart attacks?

And finally
5. Are you an above average actuary?
   - You are offered the following bet. On the toss of a fair coin you must pay £100, what is the minimum amount that you need to win in order to make this bet attractive to you?
Heuristic simplification

A BIRD IN THE HAND

Anchoring Heuristic

Stage 1:
- Person starts with initial idea of answer ("anchor")
  - Ball park estimate.
  - Anchor may be suggested by memory, or by something in environment.

Stage 2:
- Person adjusts away from initial anchor to arrive at final judgement.

Anchoring

Anchoring: Telephone numbers as an input
Anchoring

Numbers of M&Ms selected

Willingness to pay for Brownie (price in $)


Anchoring Heuristic

Given listing price
Appraisal value

Source: Investec Asset Management, 31 December 2004

Anchoring Heuristic

Autocorrelation of positive earnings estimate revisions 1975 - 2000

Past performance is not audited and should not be taken as a guide to the future.
Source: Sanford Bernstein
A person using the representativeness heuristic evaluates the probability of an uncertain event, or a sample, by the degree to which it:

i. is similar in essential properties to its parent population
ii. reflects the salient features of the process by which it is generated

**Representativeness Heuristic – Definition**

**Representativeness Heuristic**

- Mary's father has five daughters
  - Na Na
  - Ne Ne
  - Ni Ni
  - No No
  - What is the name of the fifth daughter?

**Representativeness**

![Venn Diagram showing the overlap of All men, Men Over 55, and Heart Attacks]
Glamour Stocks

“Google is one of the largest media companies in the world – buy it!” CNBC

Saliency Heuristic

- What is more prevalent?
  - Homicide
  - Suicide

Saliency Heuristic

- Endowment effect
- Talking to management?
Availability – Causes of Death

- Subjects asked to estimate frequency of various causes of death.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Estimate*</th>
<th>Truth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tornado</td>
<td>564</td>
<td>50</td>
</tr>
<tr>
<td>Fireworks</td>
<td>160</td>
<td>6</td>
</tr>
<tr>
<td>Asthma</td>
<td>564</td>
<td>1,886</td>
</tr>
<tr>
<td>Drowning</td>
<td>1,684</td>
<td>7,380</td>
</tr>
</tbody>
</table>

* rates per 200m US resident per year
Source: Slovic, Fischhoff and Lichtenstein (76); Slovic, Fischhoff & Lichtenstein (76)

Heuristics – Conclusions

- We use heuristics because they are generally useful, but they predictably get us into trouble on certain (well-studied) tasks
- Heuristics help us avoid:
  - information processing limitations
  - time limitations
- Some errors can be avoided by education, feedback, seeking multiple perspectives. It is worth avoiding these biases when correct results are important.

Heuristics and Saving

- Heuristics also affect long term saving
  - Self control
    - 68% of people think they save too little, only 14% do anything about it and everyone only wants to spend 2 hours per year doing it
  - Hyperbolic discounting
    - Immediate gratification (chocolate and bananas 25/75)
  - Inertia
    - I will save tomorrow
    - In automatic enrolment the majority go for default savings rate and default fund (90% of participants)
Overconfidence

- People think:
  - They are more able than they actually are
  - They are more able than average
  - They are more favourably viewed by others than they are

Overconfidence

How do you consider your driving ability?
- Below average: 8.2%
- Average: 30.6%
- Above average: 32.7%
- Well above average: 28.6%

Source: Investec

Emotional Response – Loss Aversion

- You are offered the following bet:
  - On the toss of a fair coin you must pay £100, what is the minimum amount that you need to win in order to make this bet attractive to you?
Loss Aversion
Fund managers are just about as loss averse as everyone else (frequency %)

Source: DrKW Macro research

Loss Aversion creates panic

Social Response – Herding
“We would rather be wrong in a crowd than right on our own!”

“My god! – I must have been mad thinking there was safety in numbers!”

Behavioural errors (panic!) create value opportunities
Top Quintile Out-performance versus Large Cap Universe 1964-2004

Source: Sanford Bernstein
Representativeness

- Which city is further East?
  - Toronto
  - New York
  - Havana
  - Santiago

Presenter Biography

James Hand
Head of Research – 4Factor
Portfolio Manager
11 years experience

James is a portfolio manager and Head of 4Factor Research for Investec Asset Management. As Head of 4Factor Research James has responsibility for ensuring the 4Factor equity process retains its systematic, consistent structure across the UK and Global teams and develops through time.
Throughout his time at Investec Asset Management James has combined working on the UK and Global teams covering the Global Technology and Telecoms sector until March 2004 and Global Technology sector until March 2007. Prior to joining Investec Asset Management, James spent three years at Schroder Investment Management, where he specialised in small cap technology stocks.
James graduated from Cambridge University with a First Class degree in Economics. He also guest lectures at Reading University’s ICMA on Behavioural Finance and has written articles on the subject for national publications, including the Financial Times.
Important information

This communication is directed at professional financial advisers only. It should not be distributed to, or relied upon by, private customers.

Any information contained in this communication is believed to be reliable but no warranty is given as to its accuracy or completeness. Whilst opinions stated are honestly held, they are not guarantees and should not be relied on.

Past performance will not necessarily be repeated. You are not certain to make a profit; you may lose money and realise a loss. The value of your investment and the income from it can go up or down. Changes in the rates of exchange between currencies may cause your investment and the income from it to go down as well as up.

Telephone calls may be recorded to confirm your instructions. March 2008

For more information please contact

Frank Doyle
Tel: 020 7597 2075
Email: frank.doyle@investecmail.com

or

Patrick McDonnell
Tel: 020 7597 2081
Email: patrick.mcdonnell@investecmail.com

Investec Asset Management
2 Throgmorton Street
London EC2N 2RU
United Kingdom