HEURISTICS & BIASES

Part four

Implications for financial decision-making

EE434 SEM 1/2022

Sunsiree Kosindesha

How do heuristics influence investor financial decision-making?


Home bias

Home bias

Origin: Stems from familiarity

What is it?: The tendency to overinvest domestically and locally.

Example:

The tendency for domestic investors to hold mostly domestic securities

The tendency to invest in companies you work for or brands you know.

Home bias

Research: Kenneth French and James Poterba(1991) documented "home bias" in "Investor Diversification and International Equity Markets"

TABLE 1—EQUITY PORTFOLIO WEIGHTS: BRITISH, JAPANESE, U.S. INVESTORS

	Portfolio Weight			Adj. Market Value
	U.S.	Japan	U.K.	
U.S.	.938	.0131	.059	$2941.3
Japan	.031	.9811	.048	1632.9
U.K.	.011	.0019	.820	849.8
France	.005	.0013	.032	265.4
Germany	.005	.0013	.035	235.8
Canada	.010	.0012	.006	233.5

Note: Estimates correspond to portfolio holdings in December, 1989. They are based on the authors' tabulations using data from the *U.S. Treasury Bulletin* and Michael Howell and Angela Cozzini (1990). Adjusted market values exclude intercorporate cross-holdings from total market value, and correspond to June 1990 values.

Bias toward the home country flies in the face of evidence indicating that diversifying internationally allows investors to reduce risk without surrendering return.

Home bias

Explanation based on familiarity:
U.S. investors are more familiar with U.S. stocks and markets, and so they are more comfortable investing in U.S. securities. The same holds equally for foreign Investors.

Intra-national Home bias

- Huberman (2001) reported intra-national home bias in a study "Familiarity breeds investment."

- In 1984, AT&T was forced by the court into a divestment whereby seven "Baby Bells" were created. These companies were created along regional lines. An example is BellSouth serving the southeastern United States.

- Shareholders of a baby bell tend to live in the area which it serves, and a baby bell's customers tend to hold its shares rather than other baby bells' equity.

Intra-national Home bias

- Grinblatt&Keloharju (2001) documented that:
  - Finnish investors prefer companies whose language of annual report is Finnish, and Swedish investors prefer companies whose language is Swedish—with bilingual companies being mid-ranked by both groups of investors.
  - Finnish speakers prefer Finnish CEOs, and Swedish speakers prefer Swedish CEOs.
- Preference for familiarity extends to language and culture.

Intra-national Home bias

- Frieder&Subrahmanyam (2005) documented that:
  - While not true for institutional investors, retail investors have a higher demand for firms with brand recognition.
  - That is, individual investors prefer to invest in stocks with easily recognized products.

Intra-national Home bias

- Benartzi (2001) documented that:
  - Many "employee-investors" put a very high percentage of their investible wealth in their employer's stock, thus foregoing a significant amount of possible diversification.
  - For example, Coca-Cola employees allocate 76 percent of their own discretionary contributions to Coca-Cola shares.
  - The tendency for employees to put their own contributions into company stock is stronger when the employer's contributions to a 401(k) plan must be invested in company stock.

Home bias

Rational argument in favor of home bias:

- An informational advantage: Asymmetric information between local and nonlocal investors may drive the preference for geographically proximate investments.

- International investment may be less attractive because of institutional barriers e.g. capital movement restrictions, differential trading costs, and differential tax rates.

Possible alternative explanations:

- Overoptimism in domestic investment

Extrapolation bias

Perceptions of price movements

- As long as there have been equity markets, investors have tried to spot trends and turning points in stock prices.

- Pring (1991) states that "the art of technical analysis- is to identify trend changes at an early stage and to maintain an investment posture until the weight of the evidence indicates that the trend has reversed."

- Whether technical analysis can work is debatable.

- An important question especially for small individual traders is:

"What price patterns do investors detect?"

Pring, M.J., 1991. Technical Analysis Explained. 3rd ed., McGraw-Hill, New York.

What price patterns do investors detect?

- De Bondt (1998) explains that perhaps the best-established stylized fact about the perception of price movement is extrapolation bias.

- Extrapolation bias is also referred to as:
  - extrapolative expectations,
  - overextrapolation,
  - excessive extrapolation.

De Bondt, W. F. M., 1998, "A portrait of the individual investor," European Economic Review 42, 831–844

What price patterns do investors detect?

- Benartzi (2001) defines **excessive extrapolation** as when people see trends and patterns even when the sequence is truly random.

- Casella&Gulen (2018) give an explanation that **an extrapolative investor** believes that recent high returns are more likely to be followed by high returns, and similarly, recent low returns are more likely to be followed by low returns.

Benartzi, S., 2001, “Excessive extrapolation and the allocation of 401(k) accounts to company stock,” Journal of Finance 56, 1747–1764.

Stefano Cassella, Huseyin Gulen, Extrapolation Bias and the Predictability of Stock Returns by Price-Scaled Variables, *The Review of Financial Studies*, Volume 31, Issue 11, November 2018, Pages 4345–4397, https://doi.org/10.1093/rfs/hhx139

What price patterns do investors detect?

- Casella&Gulen (2018) construct *"degree of extrapolative weighting (DOX)"* that captures an important aspect of overextrapolation: the tendency of investors to overweight recent returns

- This tendency may be rooted in representativeness (Bordalo, Gennaioli, and Shleifer 2017) and in a belief in the law of small numbers (Rabin 2002).

- Greenwood & Shleifer (2014) survey data provides evidence of the tendency of investors to form expectations of future stock returns by relying more (less) heavily on recent (distant) stock returns.

Pedro Bordalo, Nicola Gennaioli, Andrei Shleifer, Memory, Attention, and Choice, *The Quarterly Journal of Economics*, Volume 135, Issue 3, August 2020, Pages 1399–1442, https://doi.org/10.1093/qje/qjaa007

Rabin, M., 2002. Inference by believers in the law of small numbers. Quarterly Journal of Economics 117: 775–816.

Stefano Cassella, Huseyin Gulen, Extrapolation Bias and the Predictability of Stock Returns by Price-Scaled Variables, *The Review of Financial Studies*, Volume 31, Issue 11, November 2018, Pages 4345–4397, https://doi.org/10.1093/rfs/hhx139

Some effects of excessive extrapolation

- Purchases of mutual funds are unduly influenced by recent good performance, even though performance shows no persistence (Hendricks, Patel, and Zeckhauser, 1993).

- The **excessive extrapolation** hypothesis states that past returns on company stock are positively correlated with subsequent allocations to company stock, versus a null of no correlation (Benartzi, 2001)

  - **Familiarity magnifies the degree of extrapolation**, which in turn could make employees extrapolate more than others.

Hendricks, Darryll, et al. "Hot Hands in Mutual Funds: Short-Run Persistence of Relative Performance, 1974-1988." *The Journal of Finance*, vol. 48, no. 1, [American Finance Association, Wiley], 1993, pp. 93–130, https://doi.org/10.2307/2328883.

All That Glitters:

Attention-grabbing

All That Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors

- Brad Barber and Terrance Odean (2008) investigated whether information "availability" impacts the trading behavior of investors.

- Since attention is a scarce resource and there is a plethora of possible investment opportunities, the transactions of retail investors are likely to be concentrated in stocks that are "**attention-grabbing**".

Barber, B., and T. Odean, 2008, "All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors," Review of Financial Studies 21(2), 785–818.

All That Glitters : The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors

- Attention-grabbing stocks are such as:
  - Stocks in the news,
  - Stocks experiencing high abnormal trading volume, and
  - Stocks with extreme one-day returns.

Barber, B., and T. Odean, 2008, “All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors,” Review of Financial Studies 21(2), 785–818.

All That Glitters : The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors

- Many individual investors consider purchasing only stocks that have first caught their attention.

- Preferences, of trend followers or contrarians over stocks, determine choices after attention has determined the choice set.

Barber, B., and T. Odean, 2008, "All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors," Review of Financial Studies 21(2), 785–818.

All That Glitters : The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors

- Professional investors are less prone to indulge in attention-driven purchases.
- With more time and resources, professionals are able to monitor continuously a wider range of stocks. They are unlikely to consider only attention-grabbing stocks.
- Professionals are likely to employ explicit purchase criteria—perhaps implemented with computer algorithms—that circumvent attention-driven buying.
- Furthermore, many professionals may solve the problem of searching through too many stocks by concentrating on a particular sector or on stocks that have passed an initial screen.

All That Glitters...

- Most investors should benefit from a strategy of buying and holding a well-diversified portfolio.

- Investors who insist on hunting for the next brilliant stock would be well advised to remember what California prospectors discovered ages ago: All that glitters **is not gold.**

Barber, B., and T. Odean, 2008, “All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors,” Review of Financial Studies 21(2), 785–818.


What goes up
must come down.

The efficient markets hypothesis

- The past pattern of prices of securities should not reveal any new information that enables one to predict the future price.

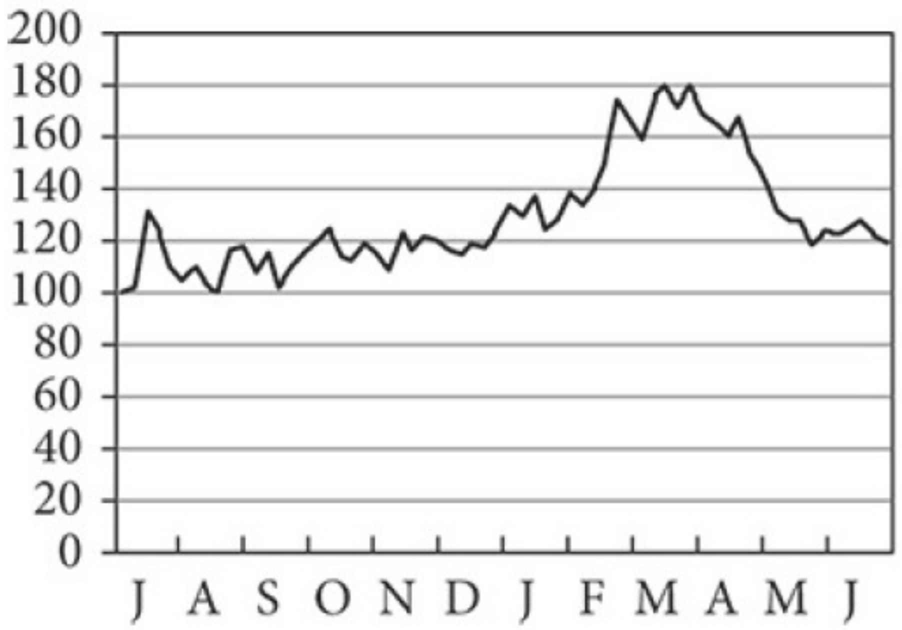
Mussweiler and Schneller (2003)'s study

- Subject pool: Business and Economics students at a German university who have had experience of the stock market, ranging from a year to approximately three years

- Students were provided with background information about a company and the relevant economic conditions, drawn from an actual financial firm.

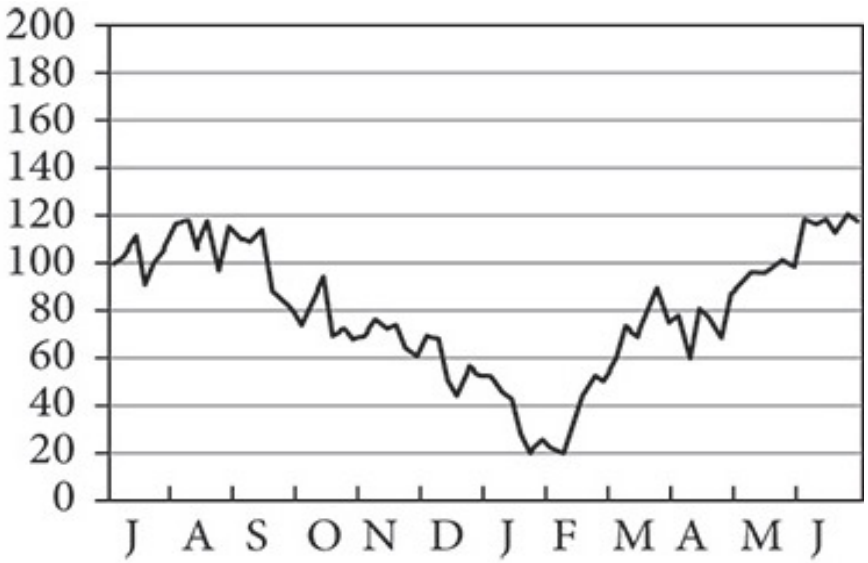
Mussweiler, T. and K. Schneller (2003). "What goes up must come down—how charts influence decisions to buy and sell stocks," The Journal of Behavioral Finance 4(3): 121–30.

Stock price of a company over the previous 12 months



What is your price expectation of the stock?
Would you invest in this stock?

Stock price of a company over the previous 12 months



What is your price expectation of the stock?
Would you invest in this stock?

Mussweiler and Schneller (2003)'s study

- The first figure has a salient high price and the second one has a salient low price.

- Otherwise the starting and the ending prices as well as the average profits corresponding to both panels are identical.

Mussweiler, T. and K. Schneller (2003). "What goes up must come down—how charts influence decisions to buy and sell stocks," The Journal of Behavioral Finance 4(3): 121–30.

The anchoring heuristics ?

- The anchoring heuristic suggests that subjects who observe the high salient price will have relatively higher price expectations and are more likely to invest as compared to subjects who are shown the low salient price.

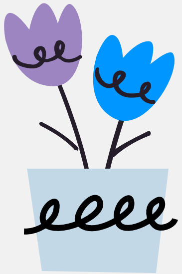
Mussweiler, T. and K. Schneller (2003). "What goes up must come down—how charts influence decisions to buy and sell stocks," The Journal of Behavioral Finance 4(3): 121–30.

The anchoring heuristics ?

- These predictions are confirmed. The predicted mean prices when the high and low price, respectively, is salient are 132 and 112; the difference is statistically significant.

Mussweiler, T. and K. Schneller (2003). "What goes up must come down—how charts influence decisions to buy and sell stocks," The Journal of Behavioral Finance 4(3): 121–30.

THANKS!



CREDITS: This presentation template was created by **Slidesgo**, including icons by **Flaticon**, and infographics & images by **Freepik**