The Behavior of Individual Investors

Recall: One of the CAPM Assumptions is:

All investors hold efficient portfolios.
A consequence is:
The Market Portfolio is efficient
& All Investors hold it.

* Familiarity Bias: Investing in the companies one
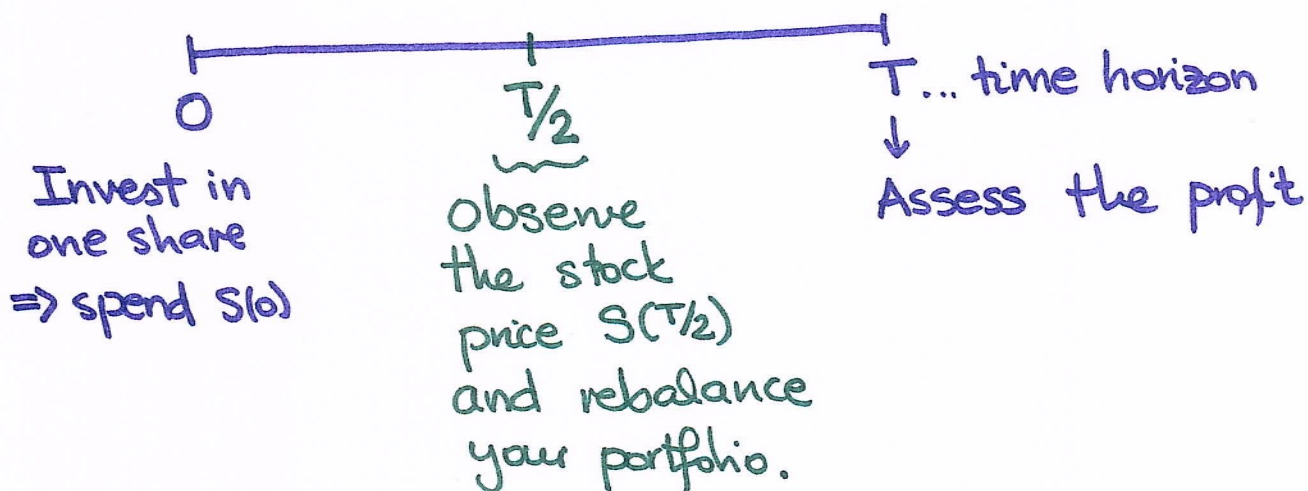 is familiar with, , e.g., their employer

* Relative Wealth Concerns: Caring about the
  performance of your portfolio compared to the
  portfolios of your peers

* Overconfidence Bias: Uninformed (or less skilled)
  individuals tend to overestimate their
  knowledge => they end up trading more
  often than skilled investors => they spend
  more in transaction costs

These are (not) likely to create a systematic trading
biase, i.e., they will (not) cause the individual stock
prices to deviate from their "fundamental" value.

①

Systematic Trading Biases.

Recall: An example from when we first introduced dynamic portfolios in M339D:

```
|---------------------|---------------------|
0                    T/2                    T... time horizon
```

0
Invest in
one share
$\Rightarrow$ spend $S(0)$

T/2
Observe
the stock
price $S(T/2)$
and rebalance
your portfolio.

T... time horizon
$\downarrow$
Assess the profit

* Disposition Effect : Hanging onto losers and selling winners.

* Herd Behavior: The tendency to imitate each other's actions on a global scale
$\rightarrow$ connected to the "relative wealth concerns"

They can create deviations from the "fundamental" values of investments.

* Investor <u>attention</u>, mood & experience. *

<u>e.g.</u>,
- financial news: breeds familiarity
- returns on the NYSE were higher on sunny days
- <u>sports news</u>: a World Cup loss which prompted lower returns on the subsequent day

  (bad sports news supposedly influenced the investors' mood)

- people who grew up in a "good" economy, i.e., in a prosperous phase of the economy, tend to invest more in the risky assets

  (investors' experience influencing investment patterns)

The Efficiency of the Market Portfolio

Q: Can sophisticated (institutional) investors consistently profit @ the expense of individual investors?

Conditions:

1st The individual investor's behavior must be sufficient to push stock prices so that non-zero-alpha emerges.

2nd Limited competition to exploit opportunities arising in **(1st)**.

* There is empirical/statistical evidence that the above happens. *

- **Takeover Bids:** Jump in the market price of the smaller company, but (not) all the way to the takeover price ("bid" price).
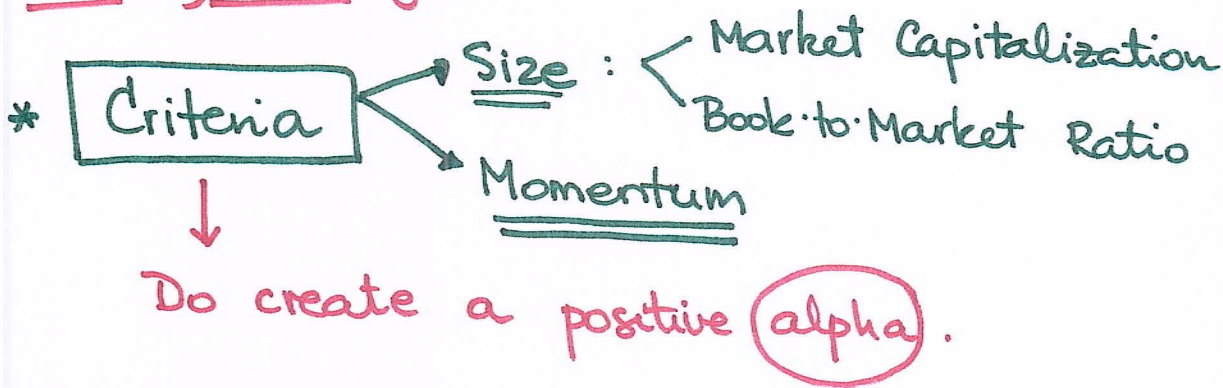
- **(Famous) Analyst's Recommendations:**

   Jump in the market prices as a reaction to the recommended purchase, because of the rise in the demand; this is then corrected if there is no "actual" news.

- **Fund Managers' Fees:** Add value only for the best? Median performance is as bad/good as that of individual investors.

(1.)

- Study of individual investors from Taiwan:
  → Individual investors lose on average 3.8% (about 1/3 on "bad bets", the remaining 2/3 on transaction costs)
  → Institutional investors earn 1.5% per year on average.

Trading strategies

* | Criteria | → Size : < Market Capitalization / Book·to·Market Ratio
              ↘ Momentum
  ↓
  Do create a positive (alpha).

* | Size Effects: | "Small" stocks have a higher risk, but also a higher return (even when one accounts for a higher β).
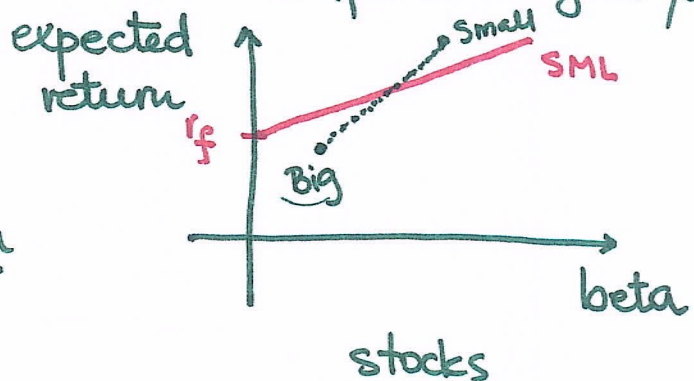
→ Market Capitalization
    Ordering
    by MV_i

→ | Book·to·Market Ratio |
    → Book Value of Equity: BV
      The difference between the firm's assets and its liabilities.

(2.)

$\rightarrow$ | Market Value | MV

Define: Book·to·Market Ratio = $\dfrac{BV}{MV}$

TEND·TO·HAVE

With high $\dfrac{BV}{MV}$ $\rightarrow$ value stocks $\rightarrow$ $\alpha > 0$

With low $\dfrac{BV}{MV}$ $\rightarrow$ growth stocks $\rightarrow$ $\alpha < 0$

Again : Fama & French

there is no statistical significance ∴

* | Momentum Strategy: |

Build a portfolio of stocks which (longs) the stocks w/ the highest past returns & (shorts) the stocks w/ the lowest past returns.

③.

Efficient Market Hypothesis

"securities w/ equivalent risk should have the same expected return"

· **Weak·form efficiency**: It should not be possible to make consistent gains by trading using the information in past prices.

· **Semi·strong·form efficiency**: It should not be possible to make consistent gains by trading using the **publicly available** information.

    ↳ e.g., · financial news (earnings, dividends);
        · takeover offers (⇒ jump ↑ is supposed to be there, it's the size of the jump which might contradict the EMH).
        · recommendations from analysts
            (⇒ jump ↑, but a correction if no "real" news).

· **Strong·form efficiency**: It should not be possible to make consistent gains using even **private** information.

    ↳ e.g., · insider;
        · difficult to obtain and analyze and act on.

④

19) Determine which of the following statements is most similar to the semi-strong version of the efficient markets hypothesis.

WEAK (A) It should not be possible to consistently profit by selling winners and hanging on to losers.

↳ disposition effect (doesn't work)

WEAK (B) It should not be possible to consistently profit by trading on information in past prices.

SEMI-STRONG * (C) It should not be possible to consistently profit by trading on any public information, such as that found on the Internet or in the financial press. *

STRONG (D) It should not be possible to consistently profit by trading on private information, such as that obtained from a thorough analysis of the company and its industry.

(E) It should not be possible to consistently profit by trading on inside information.

5.

24)	The following four observations were made about prices and/or returns:

I.	The annualized market return on perfectly sunny days in New York City is much higher than on perfectly cloudy days. *CORRECT, but (not) what we seek.*

II.	A company's stock price dropped sharply on the day it issued a warning that upcoming earnings would likely be lower than previously expected. *Semi-strong form :)*

III.	A company's stock price increased sharply on the day it was announced that they were a strong candidate to soon be taken over by a stronger company. *Semi-strong form :)*

IV.	Trader S consistently earned positive abnormal returns when using a momentum strategy that relied upon investing in stocks that had outperformed the S&P 500 index the previous year. *Actually, against the weak-form EMH.*

Determine which two of the four trends described above are consistent with the efficient markets hypothesis (EMH):

(A)	I and II

(B)	I and III

(C)	II and III

(D)	II and IV

(E)	III and IV

21) Determine which version of the efficient markets hypotheses is contradicted by a momentum strategy whereby investors can use past stock returns to form a portfolio with positive alpha.

(A) Weak form only

(B) Weak form and semi-strong form only

(C) Weak form, semi-strong form, and strong form

(D) Strong form only

(E) It does not contradict any of the three forms of the efficient markets hypothesis.