# Evidence: Weak form

- Insignificant runs and filter rule tests.
- Insignificant daily return auto-correlation (serial correlation).
- Later results positive over short horizons for portfolios (price momentum) but not for individual stocks.
- Negative over long horizons (fads, overreaction).
- Winner-loser returns and reversals (losers beat winners by a cumulative 25% over 3-years).
- Other results on D/P, P/E, yield spreads appear to predict return

SO, SHORT RUN => MOMENTUM, LONG RUN => REVERSION

# Evidence: Semi-strong form
## (notion of event studies and abnormal returns)



- Post-earnings announcement drift (sluggish, slow response)
- January and tax-loss selling

January and tax-loss selling:

- As tax-year draws to a close – losing stocks are dumped to harvest the tax loss.
- These same stocks which saw a slump in Dec, see a rebound in January, thus January effect.
- Might commodity and energy stocks see January effect in 2016? (They did not).
- Dip at the end of year and a pop at the beginning of the year should imply that people who do not have tax implications should jump in => No Dip and No Pop should be seen, IF markets are efficient.

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# Evidence: Semi-strong form
## (notion of event studies and abnormal returns)



- Post-earnings announcement drift (sluggish, slow response)
- January and tax-loss selling
- Small firms (outperform 4.3% risk-adjusted)
- Book-to-market (high performs better)
- Neglected firms

Neglected firms: Financial analysts follow only 1/3rd of the total firms => 2/3rd of the firms are neglected => There is room for retail investors to consider investing in these neglected firms => Studies have shown that people have been able to generate superior risk-adjusted alphas when they did so.

# Evidence: Strong form

- Insider trades
- Fund manager performance

Fund manager performance:

- In the West, fund managers are seen to have trouble generating consistent risk-adjusted alphas => evidence for the strong form of market efficiency.
- In China and India, fund managers are seen to be beating the markets.

# Evidence: Strong form



- Insider trades
- Fund manager performance
- Value line rankings

Value line rankings:

- Puts out research recommendations.
- Studies on people who followed these recommendations in the late 1990’s revealed that they were able to generate risk-adjusted alphas => evidence for the strong form, not holding up.

# Alternative Exposition

- No group of investors will consistently beat the market (T)
- No investor will beat the market consistently over any time period (F)
- Chances of finding an undervalued stock are 50/50 (T)
- Minimizing trading activity provides superior returns to one that involves trading frequently (T)

# Summary

- The notion of efficient markets is one that is perhaps more pertinent for investors in developed capital markets. In that context, the key question to ask is: **How efficient are markets?** NOT

**Are markets efficient ?**

- Investors in markets that are developing are less concerned with this idea. However, the prevailing view is that the behavioral paradigm we referred to in past session does apply to both markets. Besides, there are several issues that merit consideration.

a) Magnitude issue ($ 5million gain on a $ 5 billion portfolio is a lot in dollar terms, not in return terms).

b) Selection bias issue (the good strategies are never made public).

c) Lucky event issue (Warren Buffett and others like him).