# The psychological analysis

# The psychological analysis (PA)

- The human element is essential in the process of investment.
- Investment decision is
  - a subjective decision and
  - determined by human emotions.
- The existence of psychological aspects in the short-time investment was confirmed for several times.

- Compared with fundamental and psychological analysis
  PA has only a margin importace in an asset analysis.
- Fundamental analysis focuses on
  - Intrinsic value
  - Factors that determine this value
- Technical analysis
  - Analysis of past and current capital market trend to derive future development
- The interest of technical and fundamental analyzers is focused on securities.
- The interest of psychological analyzers is focused on behavior of investors on the capital market.

# The psychological analysis

- The subject of PA research is human being,
  - human factor in the process of investment
  - and impulses that evoke particular investment actions.
- The basic idea
  - Mass psychology by Gustav Le Bon
  - According to the mess psychology is possible to determine successful investors behavior
    - At the most of the time successful behavior is reverse to the behavior of the mass investors

- The initial point of the Le Bon mass psychology
  - Analysis of the collective soul
- This collective soul establishes in the place
  - where is some group of people
  - and where an particular event occurs
- People do not deal as a individuals but deal as a mass.
- Personal characteristics of individuals are put down and replace by collective way of thinking.
- In mass psychology the dominant role is played by instincts in the short time period.
  - The rational level of the mass is low, lower than is rational level of particular individuals in mass.

#### General characteristics of mass

- Vehement variability of the spirit and an sensibility
  - Investors are inspired very easy for every attractive idea. It is very easy to convince them about attractively of particular investment.
  - Wave of optimism/pessimism control whole mass.
  - The mind/rationality is put down.
  - Dominant role is played by feelings.
- Frivolity of mass
  - Mass is fed by stories about easy, quick, above-average profit.
  - Mass is not able to differ what is illusion and what is reality.
  - Mass is not able to take into account what is probable, possible and impossible.

- Exaggerate and simplified feelings of a mass
  - Feelings of mass tend to develop in extremes.
  - Mass
    - Uncritical love, or
    - Absolutely reject
- Intolerance and authoritativeness of mass
  - Mass hates criticism of mass idea and it is aiming to advocate only own idea.
  - There is only one way why mass leaves this idea, only if the mass gets new, more promoting idea that takes turn last idea.

#### Moral of mass

- Moral level of mass is very low. Moral and ethics values are not adored by mass
- Mass does not know
  - moral and ethical responsibility,
  - does not know misdoubt,
  - does not analyses for and against
  - does not take into account the possibility of punishment.

"In a gold rush, do not invest in gold diggers but in shovels"

#### Represented of psychological analyzers

- Only for short time period
- Mid-term period
  - Interest rates, liquidity
- Long time period
  - Fundamental aspects

#### Initial point

- Dividing of all capital market subjects in two categories
  - Speculates: 10 % of participants
  - Players: 90 % of participants
- Particular continuity with Le Bon mass psychology because
  - The majority of investment category of players represents the mass with characteristics and behavior.
- Speculates are strong personalities and they are immune against the mass psychology.
- In long time period speculates are more successful than players.

- Speculates firm hands
  - Characteristic of speculates
    - 4 G idea, patience, money, luck
      - Gedenken, Gedult, Geld, Glück.
    - They are able to resist of the mass psychology
    - They decision is based on relevant factors
    - In main trend in capital market
      - □ 2/3 of trend against the main trend
      - □ 1/3 of trend with harmony of main trend
    - According to investor experience there is very difficult to decide
      - When to deal against main trend activity
      - How long to stay in these activities
    - Presumption for this successful behavior is in 4Gs
    - The main problem of Kostolany theory application is that it is based on
      - Native ability
      - Luck and accident

- Players shaking hands
  - The majority of investors
  - The activities in capital market are controlled by an afford to
    - Get high revenues in the short time period
  - They are not able to analyze situation in the market
    - They copy behavior of other subjects
    - Buy if other bought
    - Sell if other sold
  - But they behavior is delayed and thus they buy in the case of high prices or sell in the case of low prices

- Activities of players are danger for a capital market because
  - They behavior is unpredictable
  - They behavior is not explained logically
- Kostolany:
  - Speculates are happy if won and if the winning was based on calculation that was despite of the others expectation correct. The fact that their calculation was correct is for them more satisfy that the money they earned. But players are different. They boasted about they winning but they were silent in the case of loss.

- Dividing of market in players and speculates with their typical framework of behavior and actions has one important reason for analyzer – psychologist
  - He is able to find out which group of investors hold the most of the securities in particular time. It means he is able to investigate technical composition of the market.
  - According to situation in the market there is possible to derive probable tendencies in the future.
  - It the most of the securities is holt by speculates it is known as a oversold.
  - It the most of the securities is holt by players it is known as a overbought.

- The technical composition of the market is based on
  - Analysis of stock exchange rates
  - Analysis of the volume of trade
- If stock prices and volume of trade are rising
  - Movement of securities form speculates to players because only players buy in the case of rising security rates
    - Market becomes overbought
    - Market is high risk and danger because the majority of securities are in the hand of subjects that deal emotionally under mass psychology

- If security exchange rates is declining and volume of trade are rising
  - Movement of securities from players to speculates because speculate are buying in the case of low security exchange rate
    - The proof of security movement is rising level of trade volume
    - This market is called oversold

- If exchange rates are declining and volume of trade is declining as well
  - It is an evidence that speculates despite of declining stock exchange rated did not start to buy
  - In this situation these is expected negative development in capital market
  - Speculates expect sharp decline in the future
    - From bull to bear market

- If security exchange rates are rising and volume of trade is declining or stagnate
  - Two possible scenarios
    - Players are controlled by pessimism or players do not get any positive information that starts they activities
    - Or player are illiquid they have no money to they investment activities
- If we know in which hands there is the majority of securities or from which hands are securities moving it is possible to derive in which phases of cycle is stock exchange.

Test of speculates

- Number of A: 11-14
- You are focused on safeness.
- If you earn money you care only how to stick them together.
- Your investment strategy must be focused on precise estimations of revenues.
- You should hold your money in bank account, maybe you can choose time deposits or short-term bonds.

- Number of B: 11 14
- You are typical a speculate investor.
- You do not prefer long-term investments.
- You are interested in stock exchange, you are looking for new information and react them in the moment.
- You are waiting for the right moment.
- You are not investor you are speculates.
- But if you do not have a time for your investments you invest your money in saving account.

- Number of A:10, or
- Number of B: 10
- You like an adventure but you also need some risk buffer.
- Your risk must be exactly calculated.
- Investment products according to your profile
  - middle-terms bonds
  - blue chips, or
  - government securities

# Epstein and Garfield Investment

# Psychology

- Ira Epstein
- David Garfield
- At the end of 20<sup>th</sup> century with questionnaire for 140 retail and 175 professional investors
- According to results 6 kinds of investor profiles
  - Very important is the role of the money in investor life.
  - For every investor is important to find out its personal, true relation to money to be able protect yourself against money.

# Epstein and Garfield Investment

# Psychology

- Masked investor: Money makes me proud and the others will be proud to me
- Depressed investor: Money makes me happy
- Revenge investor: With money I can knock down those that knocked down me
- Fussy investor: Money avoids breakup of my personality
- Paranoid investor: If I have money I can not be hurt
- Conflicted investor: Money makes me the winner but what happened if I lose?

# Theory of speculative bubble

# Theory of speculative bubble

- Prices of stocks, real estates or commodities tend to exaggerate growth without fundamental explanation for time and again.
- This strong and quick growth of a price is suddenly stopped and replaced by quick and strong decline.
- According to financial market theory these phenomenon occurs if
  - market value is significantly different from intrinsic value
- It situation is called a speculative bubble.

# Theory of speculative bubble

- Speculative bubble definition
  - Quick growth of asset price
    - Initial growth is powered by expected future growth that is attractive for new buyers especially speculators that are attracted by quick profit.
    - Strong decline of assets price very often leads to financial crisis.

- Mass psychology
- Theory of noise traders
- Ineffective market

#### Mass Psychology

- Speculative bubble is started by some important event
- This event is over- or under- valuate by investors that reacts exaggeratedly.
- Investors start to mass sale or mass buy and thus push prices more down or up.
- Bubble growths till investors believe in asset investment.

#### Noise traders

- Theory according this fluctuation of security prices from intrinsic value is evoked by existence of two kinds of investors.
- Sophisticate investors
  - Accession to information
  - Skills and knowledge to sort out information in
    - Relevant
    - Irrelevant
  - Investors are know as smart money

Noise traders

- Lack of relevant information
- Lack of investment skills and knowledge
- Activities of noise traders divert prices of assets from their intrinsic value.

# Tulip Madness

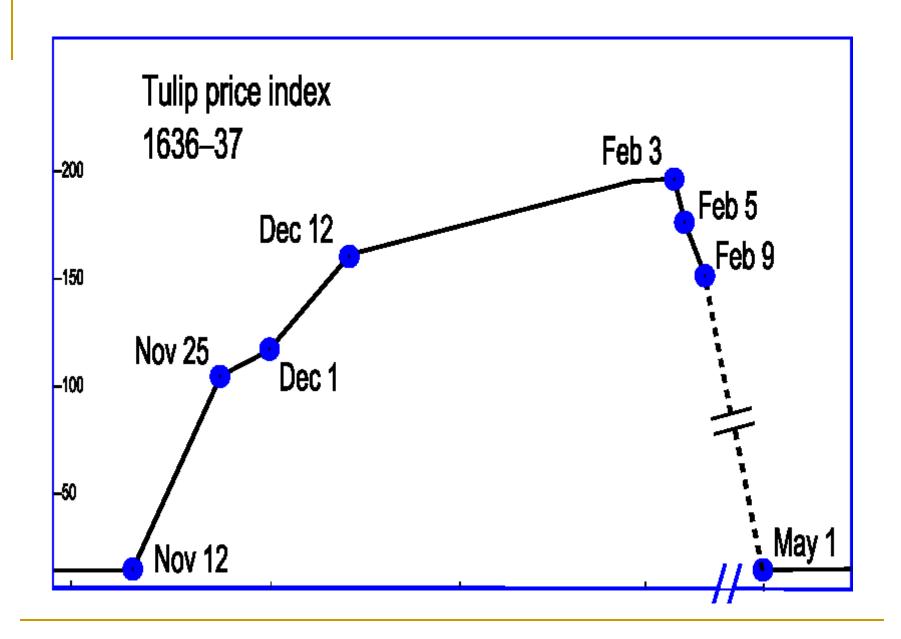
- One of the most known and historically oldest speculative bubble in commodity market.
- Tulips were unknown commodities till 1554 when were imported in Holland from South-East.
- During 100 years became fashion article.
- Tulip prices were pushed up by speculation achieved significantly high level.
- Prices of tulips grew from 1634.
- As suddenly as tulip prices grow they collapsed in February 1637.
- Optimistic expectation of investors about price growth disappeared and speculation bubble burst out.

# Tulip Madness

- Value of all forward contracts for sale or buy of tulips were abandoned and investors lost their money.
- In summer 1637 tulips traded in prices of 5-10 % of 1637 prices.



An allegory of tulip mania by Hendrik Gerritsz Pot, circa 1640.



- South Sea Bubble is the oldest bubble that came up and burst out in stock market
- England, 1720
- Initial impulse was established South Sea Company (SSC) to get financial resources for settlements debts from England-Spain war.
- Later SSC overtook part of the British budget debt.

- Interest of investors about subscribing for SSC shares was huge.
- Shareholders capital of SSC grew about 1,7 million pounds since 1719.
- Part of capital were used for debt settlement in exchange for license for trading with West and East cost of South America, Spain part of India and Spain colonies in America.

- Enthusiasm and faith of investors grew and asset demand grew as well.
- Price of one stocks grew about hundreds of pounds.
- High profit of first investors in SSC attracted another investors.
- Speculation pushed stock prices up at 1050 pounds and 1100 pounds from 126 pounds.
- In level 1100 pounds per stock psychological barrier was reached and bubble burst out.

- From price 1100 pounds per share number and interest of investors started decline.
- From September 1720 prices of SSC declined from 1000 to 175 pounds. And bubble burst out.

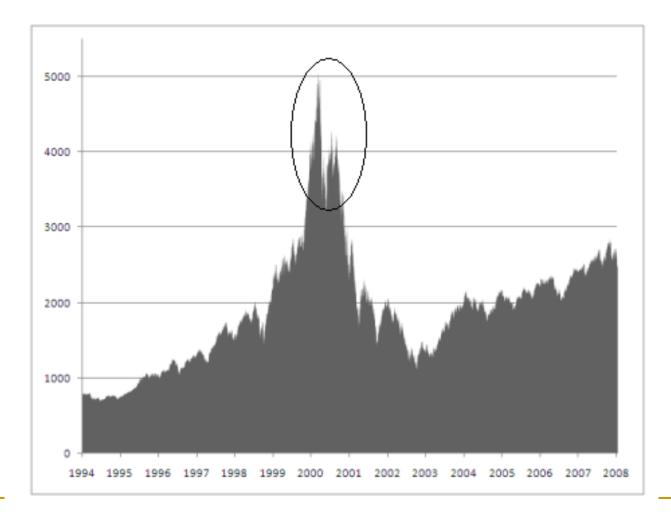


"South Sea Bubble", by Edward Matthew Ward

### Dot-com bubble

- For development of U.S. stock market and next world stocks market was typical
  - Growth of the U.S. economy: 3,2 %
  - Strong growth of IT companies stocks since the end of the 1990's
- The value of Nasdaq Composite index reached the value of 5000 point at the end of 1999.
- At the end of 1999 first consideration about overvaluation of the market.
- Peak of index 5049 points was reached in April 2000.
  - Annual reports of IT companies shows bed economic results in April 2000.
- Whole IT sector was suffered by skepticisms that spread in other sectors and branches.
- Dot-com bubble burst out.

# NASDAQ Composite 1973 - 2007



How many dollars are investors will to pay for one net unit of profit.

Market	Year	P/E ratio
NYSE	1929	21
NYSE	1969	18
NASDAQ	2000	200

## Explanation of dot-com bubble

- Mass behavior of investors
- New growing IT sector attracted investors and they were able to gain high profit.
- Dot-com bubble was growing till companies satisfied investor by their economic results.
  - Profit form IT companies was extreme compared with other sectors.
- Dot com bubble existed till company results satisfied optimistic expectation of investors.

## Explanation of dot-com bubble

- In the spring 2000 dot-com bubble burst out.
- Doc-com stock demand decline and the sale of dot-com stock started.

# Thank you for attention