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ALTERNATIVE INVESTMENT
FUND MANAGERS

Investor Presentation 2019

Overview

Decision under uncertainty

My view on decision making in Financial Markets?

How do I make investment decisions?

What is my working method?

What are the Risks?

What structure do I use?

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Decision under Uncertainty I

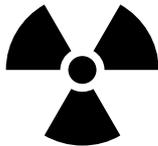## Real Estate Market

Seller: Ask Price

Buyer: Bid Price

Price on demand

Risks:
- Liquidity
- Volatility
- Solvability

Influence on price:
- Demand / Offer
- Location
- Property Condition
- Infrastructure
- Housing Market Conditions
- Interest
- Politics

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Decision under Uncertainty II

ASSET

ASK PRICES

Persons with all kinds of knowledge, experience, intelligence, professions

BID PRICES

Persons with all kinds of knowledge, experience, intelligence, professions

Multiple times a day buyers and sellers agree on a price for the same asset

Prices are based on:
- News (new information)
- Prior price movements
- Changes in individual behavioral (amines, hormones…)
- Unknown factors

Risks are mostly the same
- Liquidity
- Volatility
- Solvability

The difference to real estate markets is that you notice the direct impact on the price from
- Asset related news
- Interest rate change
- Political decisions

Even if in the long run many factors have the same effect on Real Estate or Financial assets

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Decision under Uncertainty III

What is the value of:
- A building?
- A company?
- Your grandfather's watch?

- There are many non quantifiable aspects for companies and buildings
- The main quantitative method is to calculate the Net Present Value of an asset
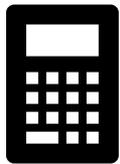
$$NPV = \frac{R_t}{(1+i)^t}$$

t = time of the cash flow
i = discount rate
R_t = net cash flow

However this method is very imprecise because of the many subjective variables
- What are the future Cash Flows?
- How far can I determine them in the future?
- What is the discount rate?

- It is mainly about forecasting the future of the following parameters
  - Interest
  - Regulations
  - Product evolution
  - Competition

- Small discrepancies between expected outcome and real outcome have huge effects on NPV
- There are as many opinions about price as there are market participants
- A seller mainly has a different opinion than a buyer on the price

Decision under Uncertainty IV

Portfolio Theory

Markowitz Nobel Prize 1990

Sharpe Ra=rf+beta(E(Rm)-Rf) Capem

Efficient Market Theory

Fama Prix Nobel 2013

Behavorial Finance

Daniel Kahneman Nobel Price 2002
Thaler Nobel Price 2017

Theory of Reflexivity

George Soros

My view on Decision Making in Financial Markets I

$$X = A + B + C + D + E + UNKNOWS$$

a1 a2 a3 b1 b2 b3 c1 c2 c3 d1 d2 d3 e1 e2 e3

aa1 aa2 aa3

ee1 ee2 ee3
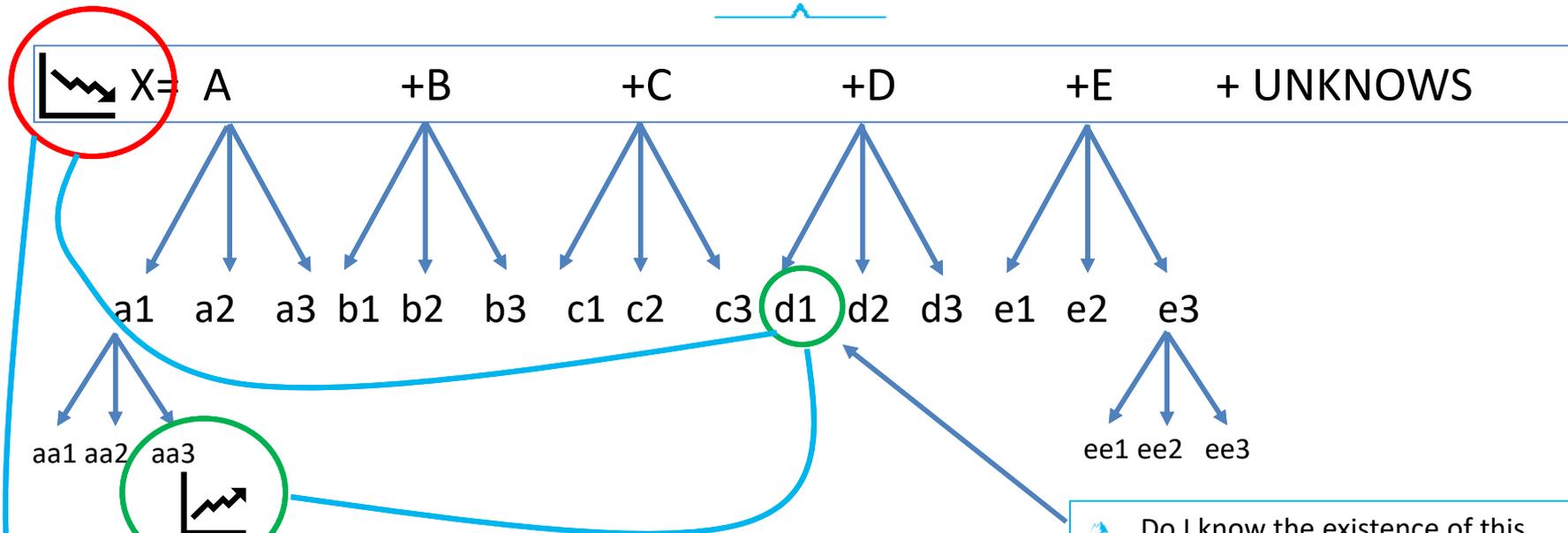
New Innovation

High Inflation

Bankruptcy of competition

Merger

Brexit Non-Brexit

Natural catastrophe

Death of CEO

Interest

Deflation

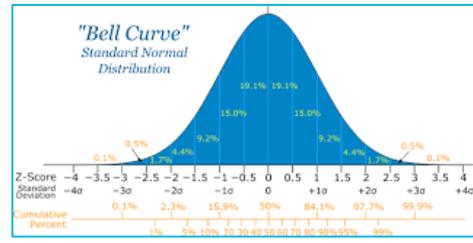China world leader?

New competition

Japan world leader?

"Bell Curve"
Standard Normal Distribution

- Do I know the existence of this variable?
- What is the causal link between this variable and X?
- What is the probability and intensity of this variable to change?

- Analyzing the past has its limitations given that we do not know the probability of past events
- For one event to happen many others did not happen
- We can consider them as being randomness

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My view on Decision Making in Financial Markets II

Extreme complexity of financial markets

- **Non linearity**: Small changes in known or unknown variables can have a huge effect on outcome (Lorenz: Chaos theory)
- It is very difficult to forecast any variable (for example e1)
- It is impossible to understand what news is directly or indirectly relevant and might influence a given asset
- It is very difficult to understand the possible short term, mid term and long-term effects of the news

Furthermore, prices can also move due to

- Investor behavior
- Prior price changes
- Unknown factors

Finally

- Even more important than forecasting, the effect of news on a certain asset is forecasting the reaction of market participants to certain news (Keynes Beauty Contest)

There are many known and unknown factors
that influence asset prices.
Investment Performance
is dependent on geopolitical,
macro economical,
company level, technical and
psychological factors.

However

- Forecasting is more than saying Yes/No/Maybe
- It is about probability and outcome nuances
- The relation subjective probability/outcome/cost is determinant

My view on Decision Making in Financial Markets III

Some facts about our brains

- Because of functional MRTs, brain science improved very fast during the last years
- The brain is modular: different parts for different things having their origin in different times. However, none works without the other
- The brain consumes about 20% of the energy for 1.4 KG (heuristics…)
- Only a small amount (around 10%) of the information that enters your brain through the different senses enter your consciousness
- Our actions, beliefs, biases are all driven by networks in our brain to which we do not have conscious access
- The unconscious brain is all the time at work, but we are typically unaware of it (walking, talking in mother tongue vs other language, etc)
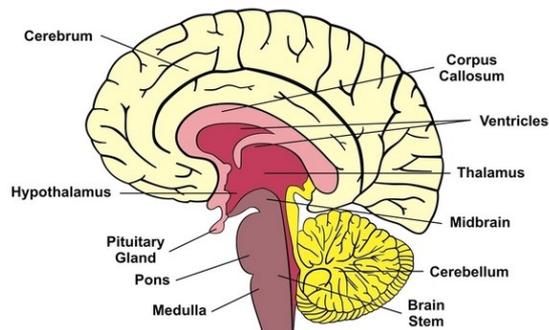
- Decision making is profoundly affected by emotions. Emotions drive actions
  - The feedback of your body (emotions) gives you a summary to avoid that you get stuck in a trade off battle. Choices have a different emotional value (take the crème brulé with parmesan cheese on top)
  - Dopamine helps you in updating your forecasts (correcting your errors)
  - Think about your past holidays (experienced vs remembered happiness, shorting a stock)
- We do not really understand the origin of our choices. We might take a different decision simply because we are holding something warm or cold in our hand
- We can practice new skills so that they become physically hardwired and sink below our level of consciousness. We can take faster choices with less energy

My view on Decision Making in Financial Markets IV

How does our Brain process all this information?

3 Options

Price increases
- How much?
- During what period?
- **Buy**

Price stays stable
- During what period?
- **Do Nothing**

Price decreases
- How much?
- During what period?
- **Sell**

- It is sheer impossible to compound all these factors and to make a **trade off** between the option of buying/selling/doing nothing
  - We do not know the future
- We cannot travel into the future, but our brain can simulate different outcomes and generate an idea of how the future might be
- The brain produces rewards in different scenarios
- Those are based on past experiences and our current model of how the world works

- In the end, we do not know why we finally made the decision for a certain option because it happened in our subconsciousness
- Our subconsciousness produces insights (connections, coincidences, contradictions)
- Decision making is profoundly affected by **emotions**. Emotions drive actions. Without, it is like having a car with a steering wheel but no power.
- The feedback from your body gives you a summary of what to avoid so you don't get stuck in a trade off battle
- Decisions are unique. We are not rational beings, meaning we take different decisions in the same situation

My view on Decision Making in Financial Markets V

The result is mostly randomness (Luck; Bad Luck)

Buyers Decision
B= X (good product)

Sellers Decision
S= X (good product)+X1 (balance sheet) + X2 (competition) + X3 (supplier) + Xn

Buyer is right on the price even if wrong on the value, the opposite is true for the seller

Was he lucky? Can we say that it is based on his subconsciousness?
→ Outcome bias

I consider Luck as being subjective relative to the variables taking into consideration

- Do both have the same risk factors if volatility is the same?
- This risk cannot be measured by quantitative past volatility, but by qualitative analyses of the decision-making process

Remember that financial markets are very complex, and that Efficient Market Theory holds in most cases

"Fortune favors the prepared mind"

Louis Pasteur

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Overview: Making Investment Decisions I

Circle of investment possibilities

Event X is happening in n years

If Event X happens, then Event Y is not happening

Event X is NOT happening in n years

Price of company X will be higher than x in n years

If event X is NOT happening in n years than it will not happen in n + y years

Company X will be able to pay back amount Y in n years

Price of company Y will be between x and y in n years

Price of company Y will be lower than y in n years

- For every transaction there is a counterparty that is
  - Forecasting
  - Considering best Trade Off between Return (objective) and Risk (subjective)

- There are many possibilities to take financial advantage of a forecast

- We can decide on which variable we want to bet by hedging the others (interest, market risk…)

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Central Hypothesis: Making Investment Decisions II

Central Hypothesis (forecast of the market)

- Find situations where you have a central hypothesis that is different to the market's story and that is a sufficient condition for a certain price change
- The central hypothesis of the potential counterparty is
  - Based on wrong factors
  - Based on not enough/too many factors
  - Based too much on emotions
- I can formulate a different central hypothesis
  - That is not composed of many conditions, but one sufficient condition
  - The probability of my central hypothesis happening must be estimable
  - The occurrence of the central hypothesis must have a large price effect
  - I understand what might happen if I am wrong
- The sufficient condition needs to offer a fair risk/return trade

I focus my research on

- Understanding the central hypothesis of the potential counterparty

- WHY I believe the counterparty is wrong

- I do not focus on information that I believe is obvious for the counterparty (balance sheet; P/L…)

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Conscious Forecasting: Making Investment Decisions III

What investments?

Who will be the next US president?	Who will be the US president in 25 years?
Is the value of Tesla going to be superior to $5 billion in 5 years? (high probability, low outcome)	Is Tesla going to be bankrupt within five years? (low probability, high outcome)
How will the Luxembourg Real Estate market evaluate in the next 5 years?	Will China be the leading economy of the world in 20 years?

- The important factor is not the probability of your forecast, but the price you get for your forecast relative to outcome and probability (cost or risk)
- A 1% probability bet can be more interesting than a 99% probability bet, for example, in option markets (option buyer against option seller)

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Forecasting: Making Investment Decisions IV

Break the main question down into smaller questions

The objective is to distinguish between the knowable and pure guesswork

Should I invest in Tesla?

Should I buy Luxembourg Real Estate?

- What is the bankruptcy probability of new car manufacturers?
- What is the probability of a second Google?
- What is the probability that the company survives a recession?
- What is the probability of a recession?

What are the necessary conditions of a positive evolution for Luxembourg Real Estate?

Even buying an ETF is a bet on inflation and/or productivity increase and/or population increase

Start with an outside view where you can consider an objective comparable base rate probability

Conscious Forecasting: Making Investment decisions V

Continue with the inside view: Guesswork
- What is the probability that Tesla is a $100 billion company with less than *x* profit?
- What is the probability that Tesla makes *x* amount of profit during the next 3 years?
- Why do we have high net immigration? (highest in Europe)
- Why do other countries have net emigration?
- What happens if interest increases by 1%?
- What variable can change this?

Use Assumptions
- Tesla is the leading car manufacturer of the world
  - How does that world look like? (competition, etc.)
- Electrical cars represent 50% of new sales
  - What are the necessary conditions for this?
- Real Estate doubles again over 10 years
  - Can people afford a 100% increase in rent?
  - How does a world look like with 1% higher interest?

Consider different perspectives
- What do other investors say?
- What do experts say?
- Consider evidence that goes against your idea
- Write a memo that doesn't agree with your idea (assuming my idea is wrong)

Subconscious Mind

- Research is very time and energy consuming, both sources that are limited
- We want to avoid being biased by having an opinion and searching for confirming information to avoid giving up that opinion
- However, we do not want to implement too many rules because our objective is to have insights
- Our subconscious is an association machine built to detect anomalies, connection, coincidences, contradictions

Different types of insights

- In case of connection insights, we get a piece of information that gives us a new idea. This connects to memorized information and we might see a new way to combine different kinds of information
- In case of coincidences, we might not understand a causal relationship between variables at the beginning, but after getting more and more details we might be able to see a new pattern
- In case of contradictions, our skeptical mind helps us find a situation that we consider impossible (for example market cap vs business). It helps us put alternative facts in front, different than those observed by the market

conscious
sub-conscious

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Objective = Increase Insights (Ideas) and Reduce Errors

- It is very important to have a flexible mind, to be able to retrieve from our beliefs (Tesla, Luxembourg Real Estate market. etc)
- It is important to be curious and keep a playful mind, imaging scenarios at times
- Guidelines are better than rules in an uncertain world
- Some brain features are genetic, but the most important is experience
    - Cumulating information is one major factor
- I always have my circle of investment possibilities in mind
    - I want to train my mind to know what I am looking for

However most insights are not "expert" insights but just help us with life in a fast-changing uncertain world

- Mr. Daniel Kahneman got a Nobel Prize for demonstrating that we make predicable errors called heuristics, which lead to biases
- It is very energy consuming to avoid these heuristics (in fact energy consumption is probably the main reason why they exist)
- We are not able to avoid them in daily life and could not live without them

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Avoiding biased decisions: Making Investment Decisions X

Reduce Errors

Illusion of Understanding

- Investors believe understanding the past is done by focusing on events that have happened, but not on events that haven't happen
- By ignoring many factors we often underestimate how much luck was needed for something to happen or for something else that did not happen
- An extraordinary good or bad quarter, a successful product may be sometimes more the result of luck than improving business or knowhow
- Upcoming companies are compared to Amazon or Google by leaving out the factor of luck, which those two companies had (early sale for Google and AWS for AMZN)
- The difference is that in contrary to a business improvement, luck is more volatile and tends to revert to the long-term mean

Try to exploit overreactions based on events that can be qualified as luck

Base rate Neglect

- By judging probabilities, investors often focus on the similarities between cause and effect by neglecting the base rate of the probability
- It might be more representative that markets rose because of a tweet made by the President of the United States, but it is often not the most important factor and not a sufficient condition
- Investors overweigh information that seems more obvious (new medicine, new product) by under weighing the base rate probability, as to say the overall situation and the effect of this news on that overall situation of the company

Avoid complex situation; focus on sufficient conditions that are probable

Availibility

- Investors tend to overweigh information that is readily available and be intuitive to information that is less salient and more abstract
- What is important is not the date of the information, but the intensity and duration of its effect

Be contrarian to price movements based on news with short term effects

Regret

- Regret does not only make investors feel miserable, but it influences decision making
- The attempt to avoid future regret is an important factor that guides financial markets
- Contrarian strategies can cause a lot of regret during a long period

**Stick to your rules, don't get emotional**

Illusion of skill

Do not overestimate your ability to forecast compared to the ability of the other market participants

Knowledge

- Once I find such an inconsistency, contradiction or connection I analyze if I might have the knowledge that helps me to be able to raise such a statement. This is conscious work
- Why did a person take your counter position?
- Try to find situations where you have special knowledge or find correlations with other situations you experienced
- Remember the objective is to increase the known variables in your decision-making equation and to base your decision on unknown factors the least amount as possible and more on if there was good luck or bad luck
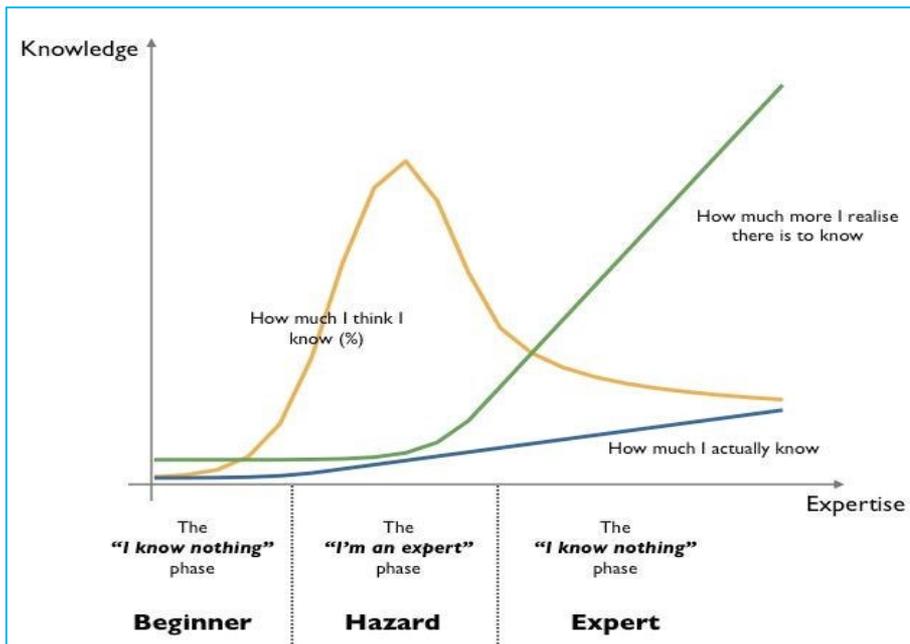
"A STRATEGY is a plan of action designed to achieve a long term gain"

"The more you know the more you know you don't know"
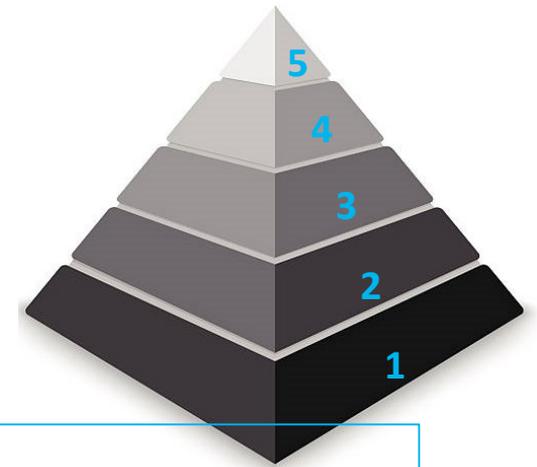
Aristotle

Knowledge Pyramid Making Investment Decisions V

I divided my knowledge about a company on a scale of 1 to 5 in order to:

- Be able to quantify and qualify knowledge
- Improve the decision-making process (increase rationality)
- Improve productivity
- Avoid taking decisions influenced by over or under confidence
- Reduce regret feeling

LEVEL 1:
I basically know nothing about the concerned company. I read an article about it, an analyses or just somebody told me about it, but it triggered my interest

LEVEL 2:
I read at least one 10Q about the company and a few articles

LEVEL 3:
I read at least one 10Q and one 10K about the company, and several articles and I try to understand the central hypothesis behind the valuation of company

LEVEL 4:
I read at least five 10Ks and 10Qs and several 8Ks. I understand the central hypothesis, the sector, the competition and I keep a weekly diary about the company

LEVEL 5:
I can clearly argue why a company's valuation might be different to the current market price, and I understand why the potential counterparty might get it wrong

Updating: Making Investment Decisions XI

- Extremely difficult task because it needs to be executed consciously and can cause stress (cortisol)

- Forecasts are not stable

- I constantly get new information that helps me adapt my forecast if my initial forecast is not accurate anymore

- Just as for the initial forecast, I have to separate important signals from noise

- Underreaction
  - Your risk being biased (anchor + confirmation bias)
  - I was price wrong on TESLA for nearly 2 years and only correct for about 3 months
  - Luxembourg Real Estate market increased over the long term, you made profits and probably overestimated your knowledge and underestimated luck
- Overreaction
  - Availability bias
  - Nothing in life is quite as important as you think it is while you are thinking about it
  - Dilution effect, think about Bayes' theorem

$$P(A|B) = \frac{P(B|A)\, P(A)}{P(B)}$$
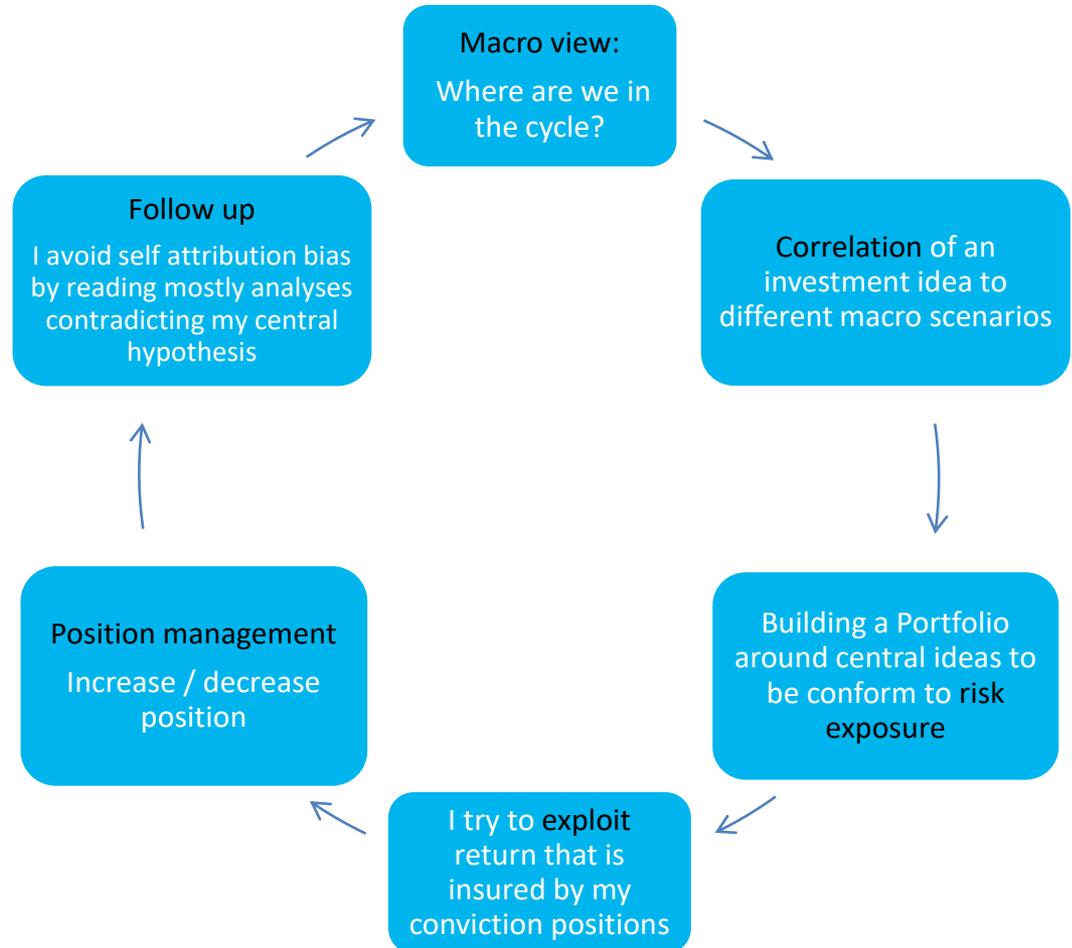
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Investment Process

Long/Short Equity
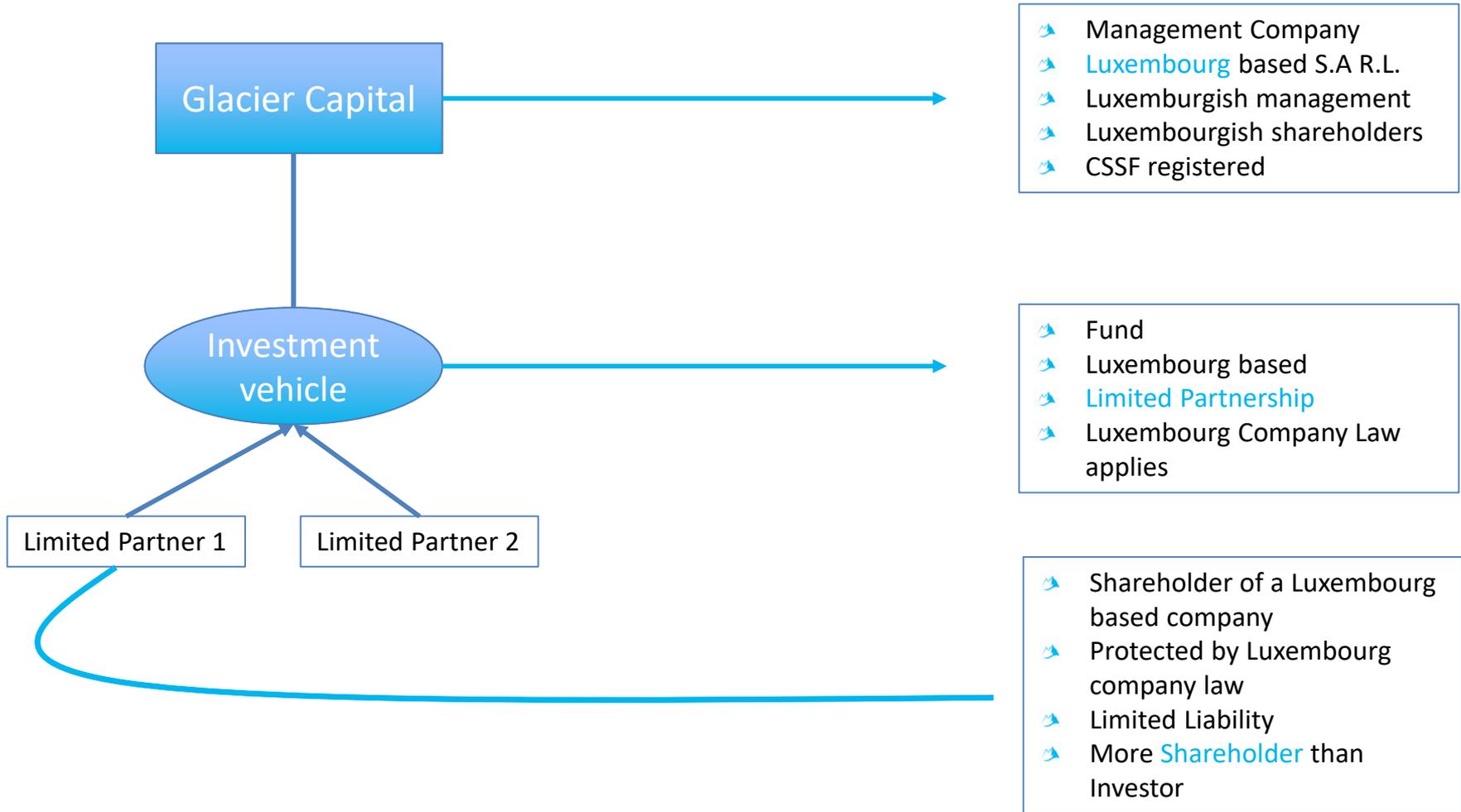
- Helps a portfolio better adapt to economic cycles
- Helps to find cheap insurances against market turmoil
- Risk on the long side might be increased because of the insurances
- It is often easier to find a flaw that is a sufficient condition than a sufficient condition for a huge success
- Best buying opportunities rise when many investors are forced to sell: Being able to buy when others sell requires a good risk management

Glaciers always remind me that risk is constantly present and that you might be blinded by the beauty of the current moment

Macro view:
Where are we in the cycle?

Correlation of an investment idea to different macro scenarios

Building a Portfolio around central ideas to be conform to **risk exposure**

I try to **exploit** return that is insured by my conviction positions

Position management
Increase / decrease position

Follow up
I avoid self attribution bias by reading mostly analyses contradicting my central hypothesis

Structure

Glacier Capital
- Management Company
- Luxembourg based S.A R.L.
- Luxemburgish management
- Luxembourgish shareholders
- CSSF registered

Investment vehicle
- Fund
- Luxembourg based
- Limited Partnership
- Luxembourg Company Law applies

Limited Partner 1 / Limited Partner 2
- Shareholder of a Luxembourg based company
- Protected by Luxembourg company law
- Limited Liability
- More Shareholder than Investor

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Investor type / Objectives

In General

Minimum Investment	€125,000 (by law)
Investor Type	Well Informed
Investment Horizon	7 years
Redemption Period	20 days anytime

Objectives

Benchmark	50% S&P500 / 50% EUROSTOXX 600
Investment Return	Min 33% of Benchmark
Investment Risk	Max 20% of Benchmark

Fees

Management Fee	0.5%
Performance Fee	20%
Hurdle Rate	5%
Entry/Exit Fee	0%

Step Plan

1 Step
- Signature of subscription agreement
- Handover of book including Limited Partnership agreement and Privat Placement Memorandum

2 Step
- Transfer of Capital

3 Step
- Monthly performance (if requested)
- Detailed Quarterly update

Key Person

Theoretical background

Master in Wealth Management (2018)
University Luxembourg

Real Estate Promoter (2011)
Luxembourg School of Commerce

Avocat à la Cour (2008)
Final Luxembourgish Bar Exam

Magister Legum (LL.M.) in Tax Law (2007)
Univesrität zu Koeln (Germany)

Master in Law (2004)
Université Robert Schuman (Strasbourg - France)

Master in Economics (2002)
University Louis Pasteur (Strasbourg - France)

Practical background

Lawyer

Management (OTIS / General Technic)

Financial (Real Estate Promoter)

Financial Markets

Summary

I started investing in financial assets in 1994. During the following years up to 2000 I generated my best performance ever. I bought stocks in companies I just knew the name off and let profits run while putting a strict stop loss order under my positions. Without any knowledge I followed a momentum strategy, in probably the best environment for momentum strategies. The more risk I took the better I was off. After a few large losses in early 2000 I closed my portfolio with a loss of around 40% for that year but an overall profit for the years 1994 to 2000. Was this decision based on intuition? Probably not because my intuition did not have enough information to take those important steps. It was purely luck.

To conclude, there are many strategies that work very good for a long time and have good risk to return ratios (Sharpe f.ex). The timing to get out of those strategies is very difficult. This Is the reason why I don't apply any strategy that could cause large losses in any statistical relevant case. Rare outcome might not happen during years or even generations but if they happen it is very difficult to come back.

Luck or bad luck plays a big part in the world of investing in financial markets because an investor needs to make only a handful of good decisions and avoid making one bad decision to outperform the market over his lifetime. I try to reduce the factor luck in my decision-making process by sticking to my rules and feeding my intuition with a lot of information by doing my own research so that it might help me to make sometimes the difference with less prepared minds.

M a r c   D A U B E N F E L D

Birth Place : Luxembourg
Nationality : Luxembourgish

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Why "*Glacier*" Capital?

Glaciers save INFORMATION dating millions of years back	↗ Helps you to analyze the little piece of time we are in and how little we know (black swan events) ↗ Our statistical models lack important information ↗ We don't know as much as we think we know, we overestimate ourselves
Ice is TRANSPARENT	↗ Glacier Capital's structure is transparent
Glaciers are DANGEROUS	↗ Preparation is important, however, Risk still prevails ↗ Positive experiences should not provoke lack of preparation (adrenaline, testosterone…)
The SIZE of Glaciers are decreasing	↗ On our short-term time horizon size is decreasing ↗ On the overall time horizon there are fluctuations on size ↗ Many "specialists" have contrarian opinions ↗ Stay away from subjects that might not find a true answer (unpredictable)

About us

Investable Universe	U.S. and Europe	**Fund Information**
Positions	Equities/Options/Bonds	**FUND TYPE** Alternative Investment Fund **FUND STRUCTURE** Limited Partnership **REGULATION** CSSF Registered (Article 3 Law of 12/07/2013) **REDEMPTION PERIOD** 20 calendar days **LOCATION** Luxembourg
Long/Short Exposure	[0 100]% / [0 50]%	
Net Exposure	[-50 70]%	
Portfolio Weights	Max 15% per position	
Investor Type	**Key words**	**Fees**
- Minimum Investment €125,000 - Well informed Investor - Long term Horizon - Seeking Alterntive Investments	High alignement Transparence Personalised Luxembourg	- Management Fee: 0.5% - Performance Fee: 20% - Current Hurdle Rate: 5% - Entry Fee: 0% - Exit Fee: 0%

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