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Is there any link between level of instruction and financial choices? A study on a Generation Y-based survey

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Abstract

Generally investors use heuristics in their process of decision-making with the aim of finding short-cuts and simplified roads to quite sophisticated answers. We conducted a survey on about 250 young people (18-27 years old) concerning their financial literacy and economic choices, given an education level which is predominantly very high (73% enrolled in a bachelor degree, 80% took part to at least some basic finance or economics courses). The survey was designed to study the influence of financial-economic literacy on the flaws occurring in financial decisions of young people (the so called generation Y), mainly with reference to biases, overconfidence, framing. The results of the survey give an insight into the behavior of a new and educated generation in typical economic decision frameworks, which could be a useful tool for stakeholders. In fact, being aware of the psychological component of the financial decision is a key factor to better understand and manage risk.

Keywords

Financial Literacy, Financial Education, Data Mining, Decision Rules

JEL Codes

G02, G11, C91, C65

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1. Introduction

Human behaviour is complicated and irrational sometimes. The assumption that all investors act in a rational way and maximise their utility becomes partially untrue considering the psychological part of the decision making process. Behavioural finance incorporates psychological knowledge into classical finance; the behaviour of Homo Economicus is thus revisited from a perspective that is more usual in social sciences.

The heuristics of the modern investor need to be studied carefully. A heuristic is a simple and general rule we employ to solve a specific category of problems, including situations involving a high degree of risk-taking and uncertainty (Ricciardi, 2004). In the process of decision-making, investors tend to find short cuts and simplified roads toward the more complicated answer, often ignoring some overt facts in front of them. This occurs in cases when there is too much information and not enough time to process it. This investor behaviour is in direct contrast with the theory of market efficiency, which implies that all investors are rational. Another common heuristic is being overconfident with past experiences and taking decisions based on past cases, ignoring new information that makes the situation more complex, which is risky for investors because it generalizes one's belief to similar products, which are different in many ways. The question is not to blame investors for poorly managing the risk of the securities, but to study to which extent these biases can influence one's decision, and if the influence is significant, how to prevent it from happening. Since risk is present in almost all financial decisions, the study of biases and psychology of risk are crucial. Heuristics can indeed be a problem in modern finance, influencing in different ways investors around the world, sometimes independently of the years of experience they gained. After a brief recall of the notions that are more characteristic in behavioural finance (Section 2), we present (Section 3) the survey conducted on Generation Y on their financial literacy and behaviour in risky investment decisions. We recall then (Section 4) the main ideas of Dominance-based Rough Set Approach (DRSA), a multicriteria methodology. DRSA is then used (Section 5) to detect ties between financial literacy and investment decisions making of the respondents.

2. Behavioral finance studies

As a discipline having individual choices as one of its fundamental principal, finance surprisingly pays little attention to the individual. In the financial industry, a human decision can influence one's portfolio, but taking into consideration the sum of all these decisions, you get the performance of an entire market (Skubic and McGoun, 2002). Humans prove to behave in a different way, which was the objective of the Prospect Theory: to study if the rational assumptions of Expected Utility Theory hold. In fact, Prospect Theory actually proves that people tend to value the losses differently than the same amount (in absolute numbers) of gains when they evaluate risky situations. Especially, people tend to accept a zero loss (which is zero gain too) over a certain amount of gain that contains a small probability of loss. This asymmetry of weights was subjected to several financial and psychological experiments that proved the statement above (Kahneman and Tversky, 1979). Individuals consider a new investment as separated from their existing wealth, which means that the cumulative utility assumption of Expected Utility Theory does not hold. Mental accounting is a relatively new concept in consumer behaviour, which contends that individuals separate the current and future assets in different accounts, offering each different utility levels (Thaler, 1999). One of the fundamental differences between these theories, besides the rationality or irrationality assumption is that prospect theory is a theory of average behaviour

(Altman, 2010).

Overconfidence is one of the most studied biases in behavioural finance. It's the most common and obvious so far. Usually to measure overconfidence, researchers use the miscalibration test, consisting in a true/false question followed by "How sure are you that your answer is correct?" For example, in a study conducted to understand if Decision Support System can help lowering the bias of investors (Bhandari et al., 2008), people were asked several basic finance questions. One of these questions was "If interest rates rise, the price of a bond will rise." This is false. Next question was "How sure are you that your answer is correct?". The study showed that 43% of participants were overconfident, meaning they thought they had more correct answers than it was in reality. This test can give an idea of how overconfident investors are and how this is going to influence their future decisions and risk perception.

A person's perception of risk is easily influenced by the way a question is posed, positive outcomes and negative ones are viewed differently by investors; people tend to answer positively in a frame that includes a thorough description of an appealing success (Weber, 1991). The formatting bias is interconnected with the Prospect Theory: the correct answer to a fair question should not depend on how the question was phrased (Tversky and Kahneman 1984). Historically, the average return on equity is much higher than the average return on federal bonds, or default-free debt. Ambiguity aversion consists in detesting unknown risk over the known risk (Rieger and Wang, 2011). People don't like when the probability of getting a return is even partially unknown; investor are risk averse, but equity returns minus bond returns, has been about 6% on average for the past century. The level of uncertainty is what makes an investment worth its return.

There is not a unique way to calculate the risk of a portfolio, and behavioural finance considers that risk can be considered as subjective. Cavezzali et al. (2015) suggest that risk taking is closely related to the level of financial literacy of investors, proving that people who possess some basic knowledge of finance are positively correlated with the risk taking behaviour while tending to take simplified decisions on diversification. The survey behind the paper was based on a questionnaire sent to 208 U.S. individuals, and once it settled that complex strategies of diversifications are not going to be used, it moves to the next question to be discussed: how financial literacy influences the risk taking behaviour. The study finds that there is a positive correlation between financial literacy and risk taking, for example people that are more skilled take higher risks, using all the opportunities the market is offering (Cavezzali et al., 2015).

3. Description of the survey

The survey is mainly inspired by Cavezzali et al. (2015) and Bhandari et al. (2008). The questionnaire is reported in the Appendix and can be roughly divided into 3 parts. The first part aims at determining whether respondents have some familiarity with general economic and financial concepts, if they are overconfident about their expertise in this respect, and their tendency to take risks. For what concerns the latter aspect, two types of questions investigate if respondents are risk averse or not. The first one (Q5) is asking to advise a friend on forming a portfolio out of three types of securities, ordered from less risky to most risky. The choices consist of bonds, equity and flexible funds, and the respondent should assign a certain percentage to each choice forming a full 100% portfolio. The second question (Q6) invites the respondent to create a portfolio with the same available choices but for him. The differences enlighten whether people perceive differently the risk when they have to give an advice and when they consider an investment for themselves. Additionally, the order of the two

questions were changed so that a part of the participants got the questionnaire where they first had to give an advice to a friend while for the second part of the group the first question about allocating the investment for themselves preceded the advise to their friend.

The second part of the survey is concentrated on a kind of framing effect; two versions of the questionnaire present two different graphs, originated from the same S&P500 data, the first version displays the graph of last month's returns while the second one shows last year's data. Participants are asked to say if they would advise a friend to invest in a portfolio whose return is displayed in a graph. The results should show how people are biased by the way information is presented to them; the graphs show the same investment opportunity differing only in the length of the considered time interval, but people choose to invest when they see a longer, apparently stable, sequence of prices and tend to refuse to invest when they see just a month of prices which appear to be less stable. We end this second part of the questionnaire asking participants to describe their level of risk acceptance (above average, on average, totally risk averse). The answer to this question allows a comparison with the portfolio choice described above while its position in the questionnaire does not allow the respondent to easily connect them, allowing for potentially conflicting answers.

The last part of the survey gathers some basic demographic information in order to explain more effectively the background of the participants, their gender, age, nationality and current education level, referring in particular to courses in finance or economics. The survey collected more than 300 responses but after careful consideration of each completed questionnaire, the number was narrowed down to 271, removing partially empty surveys. Most individuals that took part in the survey are young adults, 93% are between 18 and 27 years old, allowing, as we planned, an insight into Generation Y financial literacy and risk taking. Among participants, 66% are male and 34% are female; the education level is in average very high having 73% currently enrolled in a bachelor degree, 13% in a master degree and 1% with doctoral degree, while 14% has a high school education. The large majority of respondents (80%) took also part in a course on finance or economics, so we can state that a large part of the survey was conducted on people who are quite familiar with concepts like risk taking or financial portfolio creation (see Table 1).

Table 1. Demographics of participants

Gender		Age		Education		Already took Economics/Finance courses	
Male	66%	18-27	93%	PhD	1%	Yes	80%
Female	34%	28-36	6%	Master	13%	No	20%
		>36	1%	Bachelor	73%		
				High school	14%		

Concerning the asset allocation choices of the participants, the respondents are requested to suggest an investment choice first to a (fictitious) friend and then to take a similar decision for themselves. The results interestingly show that people tend to be less cautious when they are not involved in risk taking: up to 29% flexible risky funds are chosen for the portfolio of a friend but only 26% tapping into their own wallet (see Table 2a). This (slight) difference appears to have the opposite sign when the order of the two questions is reversed (see Table 2b).

Table 2a. Asset allocation decisions, a choice among Bonds, Equities and Flexible funds; Questionnaire 1

Questionnaire type 1	Choose for a friend		Choose for yourself	
	Bonds	36%	Bonds	38%
	Equity	35%	Equity	36%
	Flexible funds	29%	Flexible funds	26%

Table 2b. Asset allocation decisions, a choice among Bonds, Equities and Flexible funds; Questionnaire 2

Questionnaire type 2	Choose for yourself		Choose for a friend	
	Bonds	35%	Bonds	38%
	Equity	35%	Equity	36%
	Flexible funds	30%	Flexible funds	26%

The choices appear therefore to be (slightly) biased by a framing effect. Moreover, when facing the second question, some of them rethink the answer given and become more prudent, indifferently if the portfolio they are forming is for friends or for themselves. In any case, the target population of the survey generally tends to allocate almost equally between the three options, with a slight preference for more secure assets as bonds and equities.

Overconfidence, makes investors assume that some gains obtained investing are due to their knowledge and not due to other factors, in other words it's a feeling of (illusory) superiority. Most of the studies conducted on this bias were based on already established in finance workers, and it was highly predominant in more experienced workers rather than in novices. This survey asked, to Generation Y people, questions similar to those used in Bhandari et al., 2008 (Q1, Q2, Q3). The complete results are reported in Table 3. The most important result obtained is the fact that overconfidence is almost absent (questions Q1.1, Q2.1, Q3.1). In 2 out of 3 questions concerning overconfidence, the percentage of people being sure of their answer is smaller than the percentage of people answering correctly. This reveals that even though people knew the correct answer, they were not confident enough to confirm it another time.

Besides, only 49% of all the respondents think their knowledge of finance is above average, this figure being found much lower in other studies on overconfidence (Bhandari and Deaves, 2006). A direct suggestion of this result can be that individuals acquire overconfidence with experience and they do not possess it when they are young. Perhaps, it may be that if investors would be more informed, they would (try to) be less biased.

Table 3. Financial literacy (percentages corresponding to correct answers to the first three questions are underlined) and overconfidence

Answer	Q1	Q2	Q3	Q4: do you think your preparation is above average?
True/Yes	39%	<u>73%</u>	35%	49%
False/No	<u>48%</u>	15%	<u>30%</u>	51%
Don't know	13%	12%	35%	
Overconfidence: at least 80% sure to be correct	41%	45%	51%	

Another question studying the framing effect was question Q7. The respondent to the two versions of the survey, were required to answer to exactly the same question, namely if they would advise a friend to invest in a portfolio which has a trend displayed on a graph, though the graph was different for the two versions, reporting the plot of S&P500 prices during last year and, respectively, during last month.

The results, reported in Table 4, confirm that also Generation Y students are in fact biased by the framing effect. Facing the yearly graph 70% of the respondents chose to advise their friend to invest, but when shown the monthly graph, which in fact is just a small part of the previous graph, individuals were more cautious and 52% advised not to invest in that portfolio. The outcome of this question combined with the previous one confirms the inevitable fact that the framing effect can push the investor in excessive risk taking if the question presented to him takes one specific form or another.

Table 4. Framing effect

Do you Suggest to invest?	With last <u>year</u> S&B data (113 respondents)	With last <u>month</u> S&P data (158 respondents)
Yes	70%	37%
No	11%	52%
Don't know	19%	11%

4. Ties between financial literacy and investment decisions: Dominance-based Rough Set Approach

By means of the Dominance-based Rough Set Approach (DRSA), a multicriteria methodology, we will try to link financial literacy to (possibly biased) decisions in practical investment problems. DRSA allows detecting “decision rules” (Pawlak, 1982) which represent a method to detect patterns in a data set. Pawlak (1982) introduced Rough Sets Theory as a mathematical tool for imperfect data analysis where decision rules represent a method to express properties of data: this is due to the definition of a decision rule

if conditions then decisions

representing a dependence between condition criteria and decision criteria, which describes in a simple way patterns in data and therefore is the best means to communicate the results to the operators.

Recently Rough Sets Theory (RST) has been generalized through Dominance-based Rough Set Approach (DRSA) in order to be significant for multi-criteria decision analysis. The main role is now played by dominance relation which substitutes indiscernibility relation on which the classical RST has been established (Greco et al., 2002). Originally, objects characterized by the same information are considered indiscernible: the corresponding equivalence relation enables the splitting of the finite nonempty universe $\mathcal{U}$ into a family of equivalence classes (called elementary sets). Unfortunately this appealing idea is failing when objects are described by attribute with domains that are preference-orders: in fact, violations of the dominance principle could generate inconsistencies. Data are presented in a decision table, that is a 4-tuple $S = (\mathcal{U}, Q, V, f)$ where $\mathcal{U}$ is the finite set of objects (i.e. Generation Y-Decision Makers) $\{x_1, x_2, \dots, x_N\}$ and it is related to the finite set Q of k criteria (for example, information about familiarity with general economic and financial concepts, or on framing effect, or demographic information) $\{q_1, q_2, \dots, q_k\}$, V is the domain set, the union of all the domains V_{q_i} (for each $i = 1, \dots, k$), i.e. the sets of all the values of each criterion q_i , and f is the information function for which $f(x, q) \in V_{q_i}$ for each pair $(x, q) \in \mathcal{U} \times V$.

Moreover, the criteria set Q is partitioned into condition criteria $\mathcal{C}$ and decision criteria $\mathcal{D}$, that is q_i may represent for example finance or economic skills when it is considered as a condition criterion or percentage of investments on bonds when represents a decision criterion.

Then, in DRSA each domain V_{q_i} is completely preordered by an outranking relation $\succeq_{q_i}$ for which $x \succeq_{q_i} y$ when x is at least as good as y with respect to criterion q_i . Note that if each domain V_{q_i} is real valued, then

$$x \succeq_{q_i} y \quad \text{if and only if} \quad f(x, q_i) \geq f(y, q_i).$$

By referring to a decision criterion, then to each element in $\mathcal{U}$ is assigned one class Cl_t ($t \in \mathbb{N}$) with the following meaning: when $r \geq s$ then each element in Cl_r is strictly preferred to each element in Cl_s . In this way it is possible to set the definitions of upward and downward union of classes Cl_s such as follows

$$Cl_t^{\geq} = \bigcup_{s \geq t} Cl_s \quad Cl_t^{\leq} = \bigcup_{s \leq t} Cl_s.$$

Subsequently, it is possible to state that $x D_P y$, namely that x dominates y with respect to each condition criterion in $P \subseteq \mathcal{C}$, if $x \succeq_{q_i} y$ for each criterion $q_i \in P$. Given the partial preordering D_P , two sets are related to each element x in $\mathcal{U}$, that is, the P -dominating set and the P -dominated set

$$D_P^+(x) = \{y \in \mathcal{U}: y D_P x\} \quad D_P^-(x) = \{y \in \mathcal{U}: x D_P y\}.$$

P -dominating and the P -dominated sets represent the basis of knowledge, that is the knowledge is approximated by upward and downward unions of decision classes: the P -lower approximation of $Cl_t^{\geq}$ with respect to $P \subseteq \mathcal{C}$ is

$$\underline{P}(Cl_t^{\geq}) = \{x \in \mathcal{U}: D_P^+(x) \subseteq Cl_t^{\geq}\}$$

while the P -upper approximation of $Cl_t^{\geq}$ with respect to $P \subseteq \mathcal{C}$ is

$$\bar{P}(Cl_t^{\geq}) = \{x \in \mathcal{U}: D_P^-(x) \cap Cl_t^{\geq} \neq \emptyset\}.$$

Analogous definitions can be set with reference to P -lower and P -upper approximations of $Cl_t^{\leq}$ when $P \subseteq \mathcal{C}$.

Note that lower approximations contain elements that certainly belong to upward and downward union of classes, while upper approximations contain the elements that could belong to upward and downward union of classes.

Finally, it is possible to verify that approximations satisfy the following set inclusion relations

$$\underline{P}(Cl_t^{\geq}) \subseteq Cl_t^{\geq} \subseteq \bar{P}(Cl_t^{\geq}) \quad \text{and} \quad \underline{P}(Cl_t^{\leq}) \subseteq Cl_t^{\leq} \subseteq \bar{P}(Cl_t^{\leq}).$$

On dominance relations and approximations so obtained, it is now possible to generate a new description of the decision table by decision rules that can be certain, possible and approximate rules. Certain rules follow from lower approximations, possible rules are related to upper approximations while approximate rules refer to boundary regions, that is regions defined as set difference between P -lower and P -upper approximations.

A decision rule is a sequence $c_1, \dots, c_n, d_1, \dots, d_m$, that is $c_1, \dots, c_n \Rightarrow d_1, \dots, d_m$ or in short $\mathcal{C} \rightarrow \mathcal{D}$, when it is supposed that there are n condition attributes and m decision attributes ($n + m = k$). In RST the strength $\sigma(\mathcal{C}, \mathcal{D})$ of the decision rule $\mathcal{C} \rightarrow \mathcal{D}$ is represented by the ratio between the support of the decision rule and the cardinality of $\mathcal{U}$, that is

$$\sigma(\mathcal{C}, \mathcal{D}) = \frac{|\mathcal{C} \cap \mathcal{D}|}{|\mathcal{U}|}$$

With reference to the same decision rule $\mathcal{C} \rightarrow \mathcal{D}$ it is possible to set the definitions of certainty factor, $\text{cer}(\mathcal{C}, \mathcal{D})$, and coverage factor, $\text{cov}(\mathcal{C}, \mathcal{D})$, respectively as

$$\text{cer}(\mathcal{C}, \mathcal{D}) = \frac{|\mathcal{C} \cap \mathcal{D}|}{|\mathcal{C}|}; \quad \text{cov}(\mathcal{C}, \mathcal{D}) = \frac{|\mathcal{C} \cap \mathcal{D}|}{|\mathcal{D}|}.$$

Clearly, the last two indexes have a probabilistic meaning: the certainty factor of the decision rule represents the conditional probability $\pi(\mathcal{D}|\mathcal{C})$ that $y \in \mathcal{D}$ conditionally to the assumption that $y \in \mathcal{C}$, the coverage factor of the decision rule represents the conditional probability $\pi(\mathcal{C}|\mathcal{D})$ that $y \in \mathcal{C}$ conditionally to the assumption that $y \in \mathcal{D}$.

$\mathcal{D}$. In other words, we can write $\text{cer}(\mathcal{C}, \mathcal{D}) = \pi(\mathcal{D}|\mathcal{C})$ and $\text{cov}(\mathcal{C}, \mathcal{D}) = \pi(\mathcal{C}|\mathcal{D})$.

In Table 5 we report the most significant rules obtained by applying DRSA to the survey database. The answers to questions Q5 and Q6 are rearranged in order to consider just the percentage of the bond part of a portfolio chosen for a friend (Q56) and, respectively, for yourself.

For example, Rules 2 and 4 suggest that if a respondent is risk neutral and her education is of a high level then you will invest at least 10% in bonds but if she has to suggest a strategy to a friend this component of the portfolio will be higher. Rules 3 and 6 instead tell us that the respondents with no finance nor economics skills invest certainly less than 70% in bonds when suggesting a strategy to a friend, but less, i.e., no more than 60% if the choice concerns themselves.

Table 5. Behavioural rules

RULE	IF (Condition attributes)	THEN (Decision attribute) <i>Friend_Bond</i>	Support	Certainty	Coverage
1	Q1 answer correct Education $\geq$ Master	$\geq 30\%$	15	1	0,183
2	Risk neutral Education $\geq$ Master	$\geq 20\%$	14	1	0,09
3	Q1 answer correct No Finance or Economics studies	$\leq 70\%$	15	1	0,07
RULE	IF (Condition attributes)	THEN (Decision attribute) <i>Yourself_Bond</i>	Support	Certainty	Coverage
4	Risk neutral Education $\geq$ Master	$\geq 10\%$	14	1	0,08
5	Q1 answer not correct Q2 answer not correct Finance or Economics studies	$\geq 10\%$	14	1	0,08
6	Q1 answer correct No Finance or Economics studies	$\leq 60\%$	15	1	0,09
7	Q2 and Q3 answers correct No Finance or Economics studies	$\leq 30\%$	6	1	0,12
8	Risk neutral Education = High School No Finance or Economics studies	$\leq 30\%$	6	1	0,12

6. Conclusions

Behavioural Finance offers a wide range of studies that prove in different ways the negative effects of the biases on the decision making process. We studied the extent to which a young investor is being flawed by some of the main heuristics when taking a decision under uncertainty and risk.

One subject was overconfidence: our result is that Generation Y appears not to be overconfident. The percentage of people being sure that their answer is correct was smaller than the percentage of people answering correctly to that question. Probably, overconfidence is a quality that is developed through the years of working in the field, while the negative effects can be lowered by financial studies.

The second effect observed in the survey was a sort of framing effect, when the answer to a question depends on the way the question is formulated. Two types of questionnaires asked respondents to form a portfolio for a fictitious friend and for themselves, then reversing the order of the two questions: individuals were more careful and they exhibited risk aversion in the second question of this type, independently from the subject who should invest. The framing bias is truly dangerous as in finance not always the matter of an investment is clear. Having

the right person that can (repeatedly) inform, in an unbiased way, is the key to have a good diversified portfolio with the right amount of risk that one can tolerate.

The results of the survey give an insight on how young people, mainly with a good knowledge in finance, think face risky decisions in finance. A suggestion is to raise the financial literacy of new generations, also with regard to behavioural concepts, so as to create awareness of the negative effects it can cause.

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Appendix A. The Questionnaire

We report below the detailed questions of the survey used for the research.

- Q1. If choosing between an investment in government bonds and shares of private companies, one can say that bonds are riskier. (True, False, Don't know)
- Q1.1. How sure are you that your previous answer is correct? (Less than 50%, 50-80%, More than 80%)
- Q2. The primary reason the annual report is important in finance is that it is used by investors when they form expectations about the firm's future earnings and dividends, and the riskiness of those cash flows. (True, False, Don't know)
- Q2.1. How sure are you that your previous answer is correct? (Less than 50%, 50-80%, More than 80%)
- Q3. A leverage ratio bigger than 2.5 is a clear sign that the company is financially healthy and is a good investment opportunity. (True, False, Don't know)
- Q3.1. How sure are you that your previous answer is correct? (Less than 50%, 50-80%, More than 80%)
- Q4. Do you think your knowledge of basic finance is above average? (Yes, No)
- Q5. Imagine you have a friend who needs your opinion on investing his saved 10'000\$ in a combination of these alternatives for the next 12 months. Historically, bonds are considered less risky investments, whereas all the investments in stocks (national and foreign) are riskier but on average they can guarantee higher earnings. Suggest your friend (in terms of percentages) how to construct the portfolio. You even can put 100% in one box, if you feel it appropriate. The total of the investments must add up to 100%. (Bond investment - steady but pretty low income for savings, Equity investment - shares with greater volatility than bonds but higher returns, Flexible funds - a mix of foreign stocks and bonds, a little riskier than equity but higher returns)
- Q5 - 2nd type of survey. Imagine you saved 10'000\$. You have to invest in a combination of these alternatives for the next 12 months. Historically, bonds are considered less risky investments, whereas all the investments in stocks (national and foreign) are riskier but on average they can guarantee higher earnings. Construct your portfolio (in terms of percentages). You even can put 100% in one box, if you feel it appropriate. The total of the investments must add up to 100%.
- Q6. Imagine you have to take the same decision but for yourself now. You have 10'000\$ to invest in the same combination of alternatives for the next 12 months in a portfolio. The total of the investments must add up to 100%. (Bond investment - steady but pretty low income for savings, Equity investment - shares with greater volatility than bonds but higher returns, Flexible funds - a mix of foreign stocks and bonds, a little riskier than equity but higher returns)
- Q6 - 2nd type of survey. Now imagine you have to give an advice to your friend who also has 10'000\$ saved and you have to help him construct his portfolio for the next 12 months with the same alternatives. The total of the investments must add up to 100%.
- Q7. Imagine you have a friend, who is 25 years old, does not have any debt and just finished his MBA. He will inherit shortly 100'000 \$ from his deceased aunt. He is asking you an advice on forming a portfolio in which to invest the inheritance. Based on the graph below, would you recommend your friend to invest in a portfolio which has this trend? (Yes, No, Don't know) In the First kind of Survey the graph concerned some in average increasing S&P one year data, in the Second kind of Survey only last month's (rather oscillating data) of the same S&P series were presented in the mentioned graph.
- Q8. Which of the following statements comes closest to the amount of financial risk that you would be willing to take when you will save or make investments? (Take above average financial risks expecting to earn above average returns, Take average financial risks expecting to earn average returns, Not willing to take any financial risks)
- Q10. Could you indicate your gender? (Female, Male)
- Q11. Could you indicate your age? (18-27, 28-36, More than 36)
- Q12. Which is your nationality? (open answer)
- Q13. Which is your level of education (past or currently enrolled)? (High School, Bachelor Degree, Master Degree, PhD)
- Q14. Have you studied Finance or Economics courses in bachelor or in a higher degree? (Yes, No)