# Objectivity - a Pipe Dream?

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## Finalist

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\* The views expressed herein are those of the author and do not necessarily reflect those of the Organization he is affiliated to.

### On Price Indices and Objectivity

What will the rate of inflation be next year? That question can be answered in several ways. A skeptic who adheres to the Pyrrhonic conviction that it is impossible to make predictions will look at last year's inflation figures, which, assuming random changes in this macroeconomic indicator, would be the best estimate. An econometrician willapplyhismathematicalknowledge and modeling ability to analyze how inflation has been trending over the past years and whether it has been correlated with other variables. A (theoretical) economist will build a mathematical model determining the essential relationship between the endogenous inflation rate and exogeous determinants.

The estimates obtained in these three ways are likely to differ more than the average value of their ex-post error. Moreover, even an answer to the question about the inflation rate that was measured in the previous year is ambiguous. It can be given by indicating the value of the Consumer Price Index (CPI) or Producer Price Index (PPI) published by the US Bureau of Labor Statistics. Or one might use the value of the GDP deflator whose estimates are delivered by the Bureau of Economic Analysis. Then, for the sake of simplicity, one might compare the cost of the same basket of shopping bought today and a year ago. Finally, the value of each of the inflation indicators mentioned above can be calculated with the Paasche and Laspeyres indices, which will also influence the estimate. As that

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Ouel sera le taux d'inflation l'année prochaine ? La réponse dépend de la méthode de calcul. Les évaluations obtenues de différentes facons sont susceptibles de différer plus que la valeur movenne de leur erreur a posteriori. Même une réponse à la question du taux d'inflation de l'année précédente est ambiguë, on peut la donner en indiquant la valeur de l'Indice des prix à la consommation (le CCPP) ou l'Indice des prix à la production (PPI). Ou. au contraire. utiliser la valeur du facteur de déflation du PIB. La valeur de chacun des indicateurs d'inflation susmentionnés peut être calculée avec les indices de Paasche et Laspeyres qui influenceront aussi l'estimation

Nous pouvons trouver les exigences d'objectivité dans plusieurs codes de conduite en matière éthique établis tant par des associations de banque internationales que nationales, des autorités de surveillance shows, any answer to a question concerning an economic fact depends on the methods applied to getting that answer.

We can find demands for objectivity in many ethical codes of conduct in financial services. In those from national and international bank associations, from supervisory authorities, and from professional organizations. For instance, Polish banks have voluntarily agreed to be bound by the Code of Banking *Ethics*, which provides that disputes with clients are resolved "in an objective way" (ZBP 2013, p. 5). Similarly, the Code of Ethics and Standards of Professional Conduct published by the CFA Institute (2014) obliges financial analysts "deal fairly and objectively to with all clients" (paragraph III.B) and also "to achieve and maintain independence and objectivity in their professional activities" (I.B). Objectivity is mentioned as principle 2 by the Code of Ethics and Professional Responsibility set up by the Certified Financial Planner Board of Standards (2016). Being objective is also mentioned in the codes of conduct of many banks and financial institutions (cf., for instance, JPMorgan Chase&Co. 2016).

Now, though induction is an uncertain source of knowledge, I will take the liberty of claiming that objectivity is, if only implicitly, demanded by all ethical codes of conduct established by financial institutions. (How uncertain a route to knowledge induction is was convincingly argued by Taleb (2010, p. 40), when described the thoughts of a doomed turkey that took what it had seen of life so far as proof that it would live forever. Until, that is, Thanksgiving came along.)

In this essay, I advance a thesis that fulfilling such demands for objectivity is impossible. Objectivity is out of the question not because of the malice or greed of the people working in the financial sector but because an objective or – in other words – true viewpoint either does not exist or is epistemologically inaccessible.

It is clear that most of the issues dealt with by the employees of the financial sector are not matters for philosophical debate. For instance, there is an objective answer to a client's question about the commission in a relevant table of fees and commissions. Similarly, there is one mathematical formula for calculating the profit on a deposit given its value, maturity, and the interest rate. However, as I intend to highlight in this introductory section, situations in which an objective answer cannot be reached occur more often in financial services than is commonly believed. Below, I briefly review the philosophical sources of the idea of objectivity and the accessibility of truth and go on to analyze several case studies that seem to contradict such a viewpoint. Finally, I offer a few solutions.

et des organisations professionnelles. Par exemple, le Code d'Ethique et de Normes de Conduite Professionnelle publié par l'Institut CFA (2014) oblige les analystes financiers à «traiter de manière équitable et objective tous les clients» (paragraphe IILB) et aussi à «atteindre et conserver l'indépendance et l'objectivité dans leurs activités professionnelles» (I.B). Dans cet essai, i'avance la thèse que satisfaire les exigences d'objectivité est impossible. La raison est qu'un point de vue objectif ou - en d'autres termes – vrai, soit n'existe pas, soit est épistémologiquement inaccessible.

Les sophistes ont rejeté une grande partie des débats philosophiques (particulièrement métaphysiques), parce que «bien que les réponses aux questions philosophiques puissent exister, on ne peut pas connaître la vérité sur les énigmes de la nature et de l'univers». Protagoras a observé avec justesse que «l'homme est la mesure de toutes choses ».

#### A Few Words on Philosophy

In ancient Greece, beside the philosophers mainstream we recognize today, there were also sophists, who - as Sophie's teacher aptly observed in the fictionalized introduction to the history of philosophy, Sophie's World rejected a huge part of philosophical deliberations (particularly metaphysics), because "although answers to philosophical questions may exist, man cannot know the truth about the riddles of nature and of universe" (Gaarder, 1994, p. 60). One of the sophists making a living out of teaching Athenians, Protagoras, rightly observed that, for human beings, "man is the measure of all things." However, it was not the philosophical viewpoint supported

#### Graph1: Plato's Allegory of the cave.



Source: Saenredam J., Plato's Allegory of the cave, <u>http://www.britishmuseum.</u> org/research/collection\_online/collection\_object\_details/collection\_image gallery.aspx?partid=1&assetid=2611 45001&objectid=1490634, (CC BY-NC-SA 4.0). Access: 1 March 2016.

by the practically-oriented sophists that earned popularity. That is why science is now seen as an activity aimed at discovering truth.

This truth is understood as an objective description of reality, rather than as something that offers models to help deal with the world. The objective of eternal truth was established by one of the Socrates' students, Plato, who believed that truth, or – in other words – what science produces, should describe eternal ideas rather than a changeable everyday experience. Plato (2000, p. 220) believed that our experience is mere illusion, similar to the shades of reality, of ideas on a wall of the cave seen by the people held inside.

#### **Mirroring reality**

However, Plato optimistically assumed that, through rational inquiries, we can understand the reality which, located in front of the entrance to the cave, casts the shade. Indeed, understanding reality, or, in other words, explaining it, is the main goal of the most popular paradigm of the philosophy of economics scientific realism. This trend emerged in the mid-20<sup>th</sup> century in an attempt to respond to the severe difficulties faced by the Vienna Circle positivists. It was also a response to the success of the physical sciences. Even though calling economics a successful science is a risky and questionable thesis, the methodologists of this particular discipline seem to be those most supportive of the idea of scientific realism.

La science est maintenant considérée comme une activité destinée à découvrir la vérité comprise en conséquence, c'est-à-dire comme une description objective de la réalité au lieu d'offrir des modèles pour aider à affronter le monde. Cet objectif de vérité éternelle a été établi par l'un des élèves de Socrate, Platon, qui croyait que la vérité, ou – en d'autres termes - ce que la science produit, devait décrire des idées éternelles plutôt qu'une expérience quotidienne variable.

Selon le réalisme scientifique, l'objectif premier d'un scientifique est d'expliquer les phénomènes analysés. Les scientifiques réalistes croient que les théories et les modèles sont (en général) exacts. En d'autres termes, les entités invisibles (par exemple, les fonctions utilitaires, le PIB (pro-

According to this approach, which gets its strongest underpinning from the work done on the philosophy of economics by Uskali Mäki (2011), an analytic philosopher from Helsinki, the primary aim of a scientist is to explain analyzed phenomena. The truth or rightness of theories and models is defined with reference to "essesimilitude", a term coined by Ilkka Niiniluoto (2002), a Finnish philosopher of science, who attempted to describe a model depicting the key (or essential) aspects of the economic reality. Moreover, scientific realists believe that theories and models are (in general) right in their depiction of unobservable entities. Hence, their ontological status is the same as that of the reality experienced every day. In other words, those entities (e.g. utility functions, GDP and profitmaximizing companies) exist.

If you accept scientific realism you also accept that objectivity can be required of the personnel of financial institutions through their codes of conduct. According to this viewpoint, there is only one appropriate description of reality or a solution to a problem that we attempt to deal with.

That does not hold in two cases: (1) if we do not have full knowledge of the facts (even though it might possible to gain it, at least in theory) and (2) if the economic or financial reality that we are facing is inherently indeterministic. In fact, the difference between the epistemic and ontological indeterminism<sup>1</sup> is negligible for the purposes of further argument. Even though scientific realism is the most popular approach among philosophers of economics, thinkers interested in other, usually more successful sciences, do not support this viewpoint (Tegmark, 1998).

#### Heterodox approaches

There are a few alternative philosophical approaches to the issue of the truth. Milton Friedman (1953) who developed monetarist macroeconomics. supported instrumentalism. Deidre McCloskey (1983) supported the rhetoric of economics. Ludwik Fleck (1979) advocated sociologically grounded constructivism. According to the most widely supported interpretation of the essay, The methodology of positive economics,<sup>2</sup> the creator of monetarism defined the truth in an instrumentalist way: those theories and sentences are true that make fruitful predictions

<sup>1</sup> The epistemic indifference is an outcome of our limited knowledge of the mechanisms governing the reality or the initial conditions. For instance, a roulette game is random for us even though it is governed by the perfectly deterministic laws of physics. On the contrary, the ontological determinism constitutes real randomness which could not be dismissed even if we possessed all the information. As if God played dice.

<sup>2</sup> However, it should be highlighted that it is one of the most cited and interpreted articles focused on the methodology of economics, which results from Friedman's unclear style of writing and (supposedly) an attempt to appeal to economists holding various points of view.

duit intérieur brut) et les entreprises maximisant le profit) existent. Accepter le réalisme scientifique entraîne l'acceptation d'un point de vue inscrit dans la demande d'objectivité exigée de la part du personnel des institutions financières dans leur code de conduite. Selon ce point de vue. il y a seulement une description appropriée de la réalité.

#### Contrairement au réalisme scientifique. Friedman (1953) a supporté l'instrumentalisme selon lequel ces théories et affirmations qui rendent possible des prédictions fructueuses, sont vraies/ réelles. De façon similaire à un physicien qui applique les lois de la thermodynamique pour analyser le processus de refroidissement du café et la mécanique quantique pour décrire les mouvements des particules de caféine dans sa tasse, un économiste devrait choisir parmi quelques modèles en fonction de leur intérêt. Aucun des modèles n'est vrai/

possible (Friedman, 1953). Similar to a physicist who applies the laws of thermodynamics to analyze the process of coffee cooling down, but quantum mechanics to describe the movements of caffeine particles in his cup, an economist should choose among a handful of models depending on their utility. However, according to the instrumentalist methodology, none of the models is true. They are just useful in particular situations. Or, to put it differently, models are true as long as they are useful.

The professor of history of economics from Chicago criticized the realist approach and, instead, advised that we choose those theories that are an outcome of a discourse among economists. This is because comparing a theory with God's mind (the poetical postulation of the correspondence theory of truth) is virtually impossible (McCloskey, 1998). Ludwik Fleck (1979), an early 20th- century microbiologist (by profession) and philosopher of science (for a hobby) analyzed the historical development of microbiology and discovered that the descriptions of the same phenomenon differed over time and depended on previously created definitions and methods of His measurement. constructivist point of view, according to which theories depend on ways of thinking (thought styles), can be exemplified by the thought experiment that I outlined in the opening section of the article. The dependence of theoretical descriptions on the research methods employed, together with the absence

of a unified theory of economics is, according to Fleck (1979), a strong argument in favor of the utilitarian definition of truth.

Shedding the light of antirealist philosophies (either the instrumentalist one supported by Milton Friedman or the constructivist one coined by Deidre McCloskey and Ludwik Fleck) on the problem of truth shows that being objective is impossible because there is no one, fixed truth. Instead, there are only various theories, methods, and models that deal with the world of finance in a more or less successful manner. Therefore, I can only repeat McCloskey (1998),"[t]he best you can do, then, is to recommend what is good for science now, and leave the future to the gods," (p 186) because "man is the measure," as Protagoras wrote, "of the things that are, that they are, and of the things that are not, that they are not" (Reale and Catan 1990, p. 157). Below, I provide several examples from contemporary economics, which are faced by people working in the financial sector.

#### Your Truth and Mine

One of the conclusions drawn by Ludwik Fleck (1979) shows that results depend on or, to put it more accurately, are the outcome of, conventional definitions and selected methods. This viewpoint can be best exemplified by comparing the results of marketing research conducted by Coca-Cola and Pepsi Co. Kanner (1981), in his article for the *New York Magazine*, indicated that the two old réel. Ils sont seulement utiles dans des situations particulières. Le fait de projeter la lumière des philosophies anti réalistes sur le problème de la vérité montre qu'il est impossible d'être objectif car il n'y a pas une seule vérité immuable.

D'après Fleck (1979), les résultats sont le fruit de définitions conventionnelles et de méthodes choisies. Par exemple, Kanner (1981) a indiqué que les deux vieux concurrents avaient publié des résultats selon lesquels les consommateurs à qui l'on avait demandé d'indiquer leur boisson préférée au coca ont tendance à choisir le produit fabriqué par le sponsor de l'étude de marketing. De tels résultats empiriques ne sont pas une exception, mais une règle. Selon les estimations grossières de Goldfarb (1997), approximativement un article économique sur dix est en contradiction avec les autres. Un des cas les plus virulents et célèbres du phénomène

competitors had published results, according to which, consumers who had been asked to point to their preferred cola drink tended to choose the product manufactured by the sponsor of the marketing survey. Most of us, educated in the spirit of the realist philosophy, will defend objectivity and the corresponding definition of truth by indicating that these contradictory results must have been obtained fraudulently and with a view to boosting sales and profit. It cannot be otherwise. Researchers struggling for truth and objectivity do not produce contradictory findings. But, is this really the case?

# Contradictory results in econometrics

In economics, there are many cases that seem to undermine such a sanguine view of truth. One of the most vocal and famous cases of the 'emerging contrary result' phenomenon<sup>3</sup> is the Reinhart-Rogoff controversy. Given that the most quoted publications are usually the least read ones, I will briefly review the two contradictory articles and have a closer look at their methodologies.

Five years ago, Carmen Reinhart and Kenneth Rogoff (2010) published an article that made a lot of waves in which they analyzed their own database covering public debt and the economic growth of 44 countries and spanning 200 years. They arithmetically averaged the pace of economic growth for each of four buckets of country/year observations organised by the level of debt to GDP ratio (less than 30%; 30-60%; 60-90%; over 90%). The Harvard economists concluded that economic growth is much slower when the ratio exceeds 90%. Their conclusion immediately attracted attention, being quoted by Paul Ryan, the author of the Republican budget, and mentioned by several of most influential politicians worldwide, including Angela Merkel, Wolfgang Schäuble, Oli Rehn, and Manuel Barroso. Growth in a Time of Debt was referred to by Paul Krugman (2013) as "surely the most influential economic analysis of recent years".

Three years later, at the peak of popularity of Reinhart and Rogoff's (2010) paper, Thomas Herndon, a Ph.D. candidate at the University of Massachusetts, was asked to replicate their analysis. After many failed attempts, and having received the original spreadsheet of data from Reinhart and Rogoff, Herndon and his research mentors Michael Ash and Robert Pollin (2014) published an article that pinned down three errors made in the original study: (1) a non-standard averaging scheme; (2) a failure to include several post-war observations; and (3) a miscoded Excel formula that caused the exclusion of five countries at the start of the alphabet. According to Herndon, Ash, and Pollin (2014), the adjusted findings give altered results: public debt does not harm economic

<sup>3</sup> According to Robert Goldfarb's (1997) rough estimates, approximately one in ten articles on economics contradicts the others.

du « résultat contradictoire émergeant » est la controverse de Reinhart-Rogoff. Reinhart-Rogoff (2010) et Herndon Ash et Pollin (2014) ont donné des réponses opposées à la question de savoir si des mesures d'austérité étaient nécessaires. La controverse est le résultat de préférences méthodologiques différentes plutôt que de formules Excel mal codées. (Maziarz 2017).

Un autre exemple montrant qu'il n'y a pas de connaissance objective en économie est la recherche selon la cliométrie sur l'hypothèse de contraction fiscale expansionniste. Alberto Alesina et Silvia Ardagna (2009 et Jaime Guajardo, Daniel Leigh et Andrea Pescatori (2010) ont analysé comment les coupes dans les dépenses publiques influencent l'économie à court terme. Les deux groupes d'économètres américains ont essayé de démontrer si, comme le proverbe anglais le dit, le toit

development in a non-linear way.

In spite of commonly held beliefs, a precise analysis of the two methodologies and other cliometric studies of the issue (cliometrics being an analysis of economic history using quantitative methods), show that only one of the three challenged errors (the miscoded Excel formula) is actually an error. On the contrary, the other two deficiencies identified by Herndon, Ash, and Pollin (2014), i.e. the averaging method<sup>4</sup> and the data exclusion<sup>5</sup>, should be seen as methodological decisions rather than errors. Considering the negligible influence of the spreadsheet error (up to 0.3 pp) compared with the impact of the two methodological decisions (up to 1.7 pp in the case of choosing the averaging scheme), a dispute on which of the two conclusions is justified should be dismissed. Though I will refrain from choosing a winner in the "Growth in a Time of Debt"

5 Similarly, excluding the post-war period in a few countries was attributed to the lack of an appropriate estimation of the GDP of Spain and the existence of two divergent estimates for New Zealand. controversy, the controversy is the outcome of differing methodological preferences, rather than of a miscoded Excel formula. (Maziarz 2017).

If one only reads the popular press, one might develop the mistaken belief that the Reinhart-Rogoff controversy is an extraordinary case. It certainly garnered considerable attention, but there are many econometric disputes<sup>6</sup> similar to the one discussed previously where – as Ludwik Fleck wrote almost a century ago – the findings are determined by a conventionally chosen research method.

Reinhart and Rogoff (2010) and Herndon Ash and Pollin (2014) reached different conclusions on the questionofwhetherausteritymeasures are needed. Alberto Alesina and Silvia Ardagna (2009) from the National Bureau of Economic Research and Jaime Guajardo, Daniel Leigh and Andrea Pescatori (2010) employed at the International Monetary Fund analyzed how government spending cuts influence the economy in the short term and also had divergent findings. However, in this case, the discussion appropriately focused on methodological issues instead of on picking on mistakes and a purposeful fudging and flubbing aimed at arriving at the expected result. Their main aim was to attempt to determine whether, as the English proverb says, the roof should be fixed while the

6 To be honest, I believe that theoretical economics is even more contradictory than the empirical branch, but it is not my field and hence I limit myself to discussing cases from econometrics and finance.

<sup>4</sup> Reinhart and Rogoff (2010) employed a weighted averaging scheme calculated in two steps. First, they averaged the pace of economic growth for each country in every of the four baskets. Second, they calculated four average paces of economic growth for every basket (i.e. averaged over countries regardless of a number of country/year observations). In contrast, Herndon Ash and Pollin (2014) applied an unweighted averaging scheme, arithmetically averaging the pace of economic development observed in each of the four baskets. Both methods are justified to a similar degree (for a more detailed analysis, see my recent article (Maziarz 2017).

devrait être réparé pendant que le soleil brille, ou, au contraire. si les réparateurs devraient attendre jusqu'à la fin de la récession Comme dans le cas de la controverse de Reinhart-Rogoff, les constatations sont divergentes, mais la discussion s'est concentrée de facon adéquate sur les problèmes méthodologiques au lieu de s'en prendre aux erreurs.

#### Le phénomène de parvenir à des résultats contradictoires est-il spécifique à l'économie?

Au début des années 1999, le gouvernement kenyan décida de financer l'administration de médicaments antiparasitaires aux enfants en âge scolaire. Miguel et Kremer (2004) ont analysé cette initiative. Les deux économètres spécialisés dans l'économie du développement ont indiqué qu'en plus de réduire l'épidémie parasitaire, le programme a limité l'anémie, a amélioré la nutrition infantile et a réduit l'absentéisme scolaire (d'un tiers).

sun is shining, or, in contrast, the roofers should wait till the end of the recession.

The basic issue in such a research project is to grasp the timing of the spending cuts made by governments. In many cases, the changes in public debt levels can be attributed to other factors, such as a volatile macroeconomic situation, which has an impact on tax income. Alesina and Ardagna (2009) identified years in which tax reforms took place based on an analysis of changes in the cyclically-adjusted primary balance. A team at the IMF employed a divergent methodology, which was based on analyzing government papers (e.g. official documents, reports from financial institutions international and organizations, etc.). The two methods pinpointed different years as the time of fiscal reforms (to be exact, they concurred only 30% of time), even though the question of the timing of spending cuts seems to be easy to address as a historical fact.

On the one hand, of course, the results are to some degree similar. Namely, both studies demonstrate that fiscal reforms involving spending cuts and not raising taxes are better for economic development. On the other hand, they produce conflicting answers to the question whether fiscal contractions have a positive influence on economic growth in the short term. Alesina and Ardagna (2009) support the 'expansionary' fiscal contraction hypothesis. In contrast, Guajardo, Leigh, and Pescatori (2010) oppose it and argue that fiscal contractions cause a short-term recession because of reduced demand. An important conclusion for this essay is that both methods are widely accepted among the cliometric fraternity.

# An objective medical treatment?

Cases such as the expansionary fiscal contraction hypothesis, in which econometricians arrive at contradictory results because of a preference for alternative methods, are not uncommon. Such problems also surface in the analyses of scientists working in different fields. For instance, in early 1999, the Kenyan government decided to finance administering antiparasitic drugs to school-age children. Miguel and Kremer (2004) investigated this initiative. The two econometricians from Berkley and Harvard, specializing in development economics indicated that, apart from helping to control the epidemic of parasites, the program reduced anaemia, improved child nutrition and cut school absenteeism (by one-third). Their results, published by Econometrica, become very influential and made the World Health Organization advise dosingthe whole population with the antiparasitic drugs every six months, without prior screening tests.

Eleven years after the original research, Aiken et al. (2015) attempted to replicate it. Their results were published in the *International Journal of Epidemiology*. The researchers from the London School

Leurs résultats ont eu une grande influence au point que l'Organisation Mondiale de la Santé a recommandé de donner des médicaments antiparasitaires tous les six mois à toute la population sans tests de dépistage préalables. Des années après la recherche originale. Aiken et al. (2015) ont essayé de la reproduire. Les chercheurs n'ont pas trouvé que la différence en ce qui concerne les enfants anémiques et l'absentéisme entre les deux groupes était statistiquement significative.

Les décisions et la connaissance dépendent de suppositions et des méthodes d'évaluation aussi dans la finance. Au cours des dernières années, on a reproché aux banquiers polonais d'offrir des hypothèques en monnaies étrangères. À cause de la fluctuation of Hygiene and Tropical Medicine employed an alternative method of model estimation and slightly redefined the test groups (control and treated) because, in their opinion, the trial was not strictly randomized. Aiken et al. (2015), contrary to the econometricians who first analyzed the issue, concluded that the treatment under consideration was not efficient. Namely, they did not find statistically significant differences between the two groups with regard to anaemic children and school absenteeism. These three cases show that, as Ludwik Fleck observed in the case of medical research, the findings depend heavily on the methods employed. Thus, constructing the truth - instead of discovering it - seems to be the main aim of the researchers. If that is the case, and if employees in the financial sector find themselves in situations similar to those dealt with by academics, the demands of objectivity cannot be met.

#### The struggle for objectivity in the financial sector

In the last few years, Polish bankers have been reproached for offering foreign currency mortgages. Because of unfavourable way in which currency exchange rates fluctuated, the value of such loan often exceeded the actual value of the property. In addition, some of them are likely to turn into bad debt in the near future. So, can advising customers to take foreign currency mortgages be called unethical in the light of the above arguments? In other words, is the creditor - at the time of conducting the analysis (which, according to the ethical codes of conduct, should be objective) - able to predict that a mortgage denominated in Swiss francs is likely to become he less optimal product, i.e. more expensive than the one denominated in the domestic currency? A few years ago, when the Swiss franc was cheaper (and devaluating) and the interest rates were much lower, taking out a foreign currency mortgage was more efficient. At that point, it was considered a better choice even if moderate and unfavorable exchange rate changes were to occur. As in the case of calculating how public debt might affect economic growth, what advice should be given to someone applying for a mortgage depends on the assumptions used. In this case, calculating the risks for various foreign exchange rate distributions may change the advice given to a property buyer applying for a mortgage. Of course, from today's perspective, it is easy to reproach financial advisors for underestimating the risk of changes in foreign exchange rates. However, a few years ago, say in 2008, when the Swiss franc was constantly devaluating, almost no one could predict how much this currency would appreciate in the next few vears. Behavioral psychologists coined the term outcome bias to describe the human tendency to condemn decisions that lead to a bad

(défavorable) des taux de change, la valeur d'un tel prêt a souvent dépassé la valeur réelle de la propriété. Dans ce cas, le fait de calculer les risques pour des distributions de taux de change variés peut modifier le conseil donné à un acheteur de propriété sollicitant une hypothèque. Bien sûr, en se basant aujourd'hui, il est facile de reprocher au conseiller financier d'avoir sous-estimé le risque de fluctuation des taux de change.

Le problème a aussi été expérimenté par plusieurs institutions financières américaines qui ont échoué à évaluer le risque. Si nous supposons qu'il y a un risque objectif de défaut d'une entreprise X, qui vient de demander un prêt. il est impossible d'anticiper le fait de devenir insolvable et n'importe quelles suppositions ou estimations faites par les analystes de risque de crédit sont hautement différenciées. On peut comprendre le problème de l'évaluaoutcome without actually considering what those decisions were and why they were made. .

However, there are many other problems where there is no single, objective solution. When applying for a mortgage, in addition to choosing a currency, borrowers ask their financial advisors whether a fixed or variable interest rate is more efficient, better, or - simply - cheaper. This question also cannot be answered in an objective way. Advisors do not have the knowledge to do so. That is, advice given to a loan applicant estimated future depends on interest rates over the repayment period and the risk appetite of the financial advisor's customer. Even economists who think such things can be modelled would admit that the forecasts depend strongly on the methods used and - as is the case when predicting future inflation rates, the forecasts differ more than their expost error will. There is no one, true answer to such questions. Therefore, the demands of objectivity cannot be met by a financial advisor because, in some cases, objective knowledge is out of reach - as demonstrated by the cases discussed above.

Similarly, from the point of view of a financial institution, obtaining objective information is also impossible. For instance, in order to make a profit, financial institutions should estimate credit risk appropriately. Mistakes and negligence in this area resulted in the major crisis of 2007/2008 when several major financial services companies declared bankruptcy and others were nationalized. However, even if we assume that there is an objective risk of default that can be assigned to a company X, which has just applied for a loan, insolvency<sup>7</sup> is impossible to foresee and any guesses or estimates made by the credit risk analysts vary hugely. However, sometimes, as was the case just before the last financial crisis erupted, though the ratings published by rating agencies did not vary much at all, the consistency did not indicate their accuracy.

The problem of objectively estimating credit risk can be seen when looking at the differences in estimated future gains and the profit actually earned by companies. For instance. Barber et al. (2001), in their work, [Can] investors profit from the prophets?, simulated the strategy of buying (or short selling) stock with best and worst recommendations produced by security analysts applying fundamental analysis. According to their calculations, when transaction costs are incorporated, buying undervalued stock and selling overvalued stock generates profit that does not significantly differ from zero. Many researchers analyzed different time periods, markets or the details of trading strategy, and their conclusions are comparable.

The strategy of finding overvalued and undervalued stocks failed

<sup>7</sup> This would imply that our world is perfectly deterministic and none of us, even the CEO managing company X, has a free will (Lawson, 1997, p. 29).

tion objective de risque de crédit quand on voit les différences entre l'estimation des gains futurs et le bénéfice effectivement réalisé par les sociétés. Par exemple, Barber et al. (2001) ont indiqué qu'en achetant un stock sous-évalué et en en vendant un surévalué génère un bénéfice qui ne diffère pas significativement de zéro.

#### D'un côté, selon les codes de conduites existant, les gens qui travaillent dans le secteur financier devraient être objectifs et donner des informations vraies à leurs clients. De l'autre, de nombreuses études de cas analysées montrent qu'il y a bien des situations auxquelles sont confrontés les chercheurs économiques, les employés de banque et les institutions financières où les exigences d'objectivité sont impossibles à respecter.

La raison n'est pas l'avidité. Au contraire, même lorsqu'on travaille de bonne foi, être objectif est impos-

because financial analysts, referred to by Barber et al. (2001) as "prophets," failed to predict the future profit levels. Considering the efficient market hypothesis and the fact that smaller markets are less likely to be efficient, it might be better to look at an analysis based on the Polish Warsaw Stock Exchange instead of the New York Stock Exchange. Kowalke (2015), contrary to Barber et al. (2001), did not analyze whether it is possible to profit from listening to the fundamental analysts but compared their predictions (strictly speaking, the net profit and earnings before interest and taxes (EBIT)) with the actual data published by companies. The Polish economist found the accuracy of financial analysts' forecasts was "considerably low".

However, being objective is impossible not only in estimating risk or the likelihood of insolvency. Financial advisors are often confronted with a question of how to invest the customer's money. On the one hand, there are more profitable (and more risky) options, such as stock markets and investment funds. On the other, banks offer a safe haven approach to deposits. Of course, the majority of economists point out that the stock market is more profitable in the long run. However, how long is the long run? And, as Keynes (1971) wrote in A Tract on Monetary Reform,"in the long run we are all dead." In the short term, say five or ten years, stock market profits will depend on the macroeconomic situation. To predict

it is, based on my experience, much more complicated than foreseeing the income of a single company. Of course, the risk aversion of a customer seeking a piece of financial advice can be measured and professional appropriately adjusted. help However, such a measurement, based on a psychological test, will not be objective either. Just think of acquiescence bias (e.g. Friborg et al., 2006). According to this, people are more likely to agree with the questions asked in questionnaires rather than oppose them. Therefore, an unethical financial advisor who makes a living out of commissions from selling financial products could set up a test in a way that reduces their customers' risk aversion in order to sell, for instance, shares instead of bank deposits and make a higher commission. But, even without finding fault with employees in the financial sector (and that is not my intention in this essay), it is impossible to say which of the scores aimed at measuring risk aversion based on a handful of options is objective.

#### How to Make the Pipe Dream Come True?

On one hand, according to existing codes of conduct, people working in the financial sector should be objective and provide true information to their customers. On the other hand, several analyzed case studies show that there are many situations faced by research economists and the personnel of sible car les résultats des estimations, les modèles développés et les indices financiers de prédiction ainsi que les mesures de risque dépendent fortement de suppositions et de méthodes conventionnelles et, assez fréquemment, arbitraires.

Puisque le fait de choisir une des alternatives ne peut pas avoir lieu d'une facon rationnelle (sachant que des arguments tels que «c'est ce que la plupart des gens font»), il n'y a pas une seule vérité objective. Il y a seulement des modèles et des hypothèses qui sont construits. Les exigences d'objectivité ou le fait de donner une information vraie sont, dans bien des cas, impossibles à remplir et il faut l'attribuer à une raison épistémique. Est-il possible d'assurer les intérêts des clients des institutions financières sans établir des normes éthiques qui sont impossibles à respecter ?

banks and financial institutions where the demands of objectivity are impossible to meet. The reason is not greed or malice on the part of the financial sector. On the contrary, even if they worked in good faith, being objective is impossible because the results of estimations, models and predicted financial indices, as well as of risk measures, depend heavily on conventional and, not infrequently, arbitrary assumptions and methods.

Consider, for example, each of the following choices: the weighted averaging scheme preferred bv Herndon, Ash and Pollin (2014) or the unweighted one employed by Reinhart and Rogoff (2010); one of the methods of indicating when governments cut their expenditures based on assessing credit risk, or quantifying the inflation rate with the Paasche or Laspeyres formula. Both are supported by a number of arguments and these methodological choices create alternative truths. Since choosing one of the alternatives cannot be conducted in a rational way (assuming that arguments such as "this is what most people do" or "it is conventionally right" do not convince us), there is no single, objective truth. There are only models and hypotheses that are constructed. Of course, in everyday practice, the employees of the financial sector mostly deal with the situations of a lower epistemic complexity. I certainly do not argue that there is no objective answer to the question: "what is the euro/ dollar exchange rate now?", but the situations described above are much

more interesting from an ethical point of view.

The above considerations lead to the conclusion that the demand of being objective or providing true information is, in many cases, impossible to fulfill and this is attributed to an epistemic problem. Can we make the pipe dream come true? And, if yes, how? In order to answer these questions, we should have a closer look at what the demands of objectivity are aimed at. Is it "the love of wisdom" (i.e. literal translation of the Greek term A life without objectivity φιλοσοφία - philosophia)? Or, in contrast, were those who penned ethical codes of conduct - supervisors, bank and financial institution executives or professional associations - driven by the desire to safeguard customers' interests? Paraphrasing Richard Rorty's (2009) book title, the truth cannot be mirrored because, as Ludwik Fleck argued, it depends on the methods applied. Hence, various analysts, using alternative methods, arrive at different and sometimes contrary "truths." However, I should highlight that the microbiologist used this word in a way similar to that done by Milton Friedman (1953) to refer to the high utilitarian value of a model compared to verisimilitude understood in the realist way.

#### A life without objectivity

Since the viewpoint of people interested in ethics in finance, despite their philosophical erudition, is closer to the one presented by 76

À la place des exigences d'objectivité, les codes de conduite éthique devraient inclure l'exigence d'agir dans l'intérêt des clients. Cependant il y a deux défis à cette approche. Tout d'abord, même si les banques et les institutions financières fournissent des services utiles, leurs intérêts sont parfois en opposition avec ceux des clients. Ensuite, nous ne savons toujours pas si les gens sont des individus guidés par des principes moraux ou des homo oeconomicus centrés sur le profit. Au lieu d'exiger l'objectivité, les employés du secteur financier devraient être rémunérés de façon à ce que leurs revenus dépendent du bénéfice des clients ou de l'efficacité de leurs décisions.

the instrumentalist economist/ philosopher or the constructivist microbiologist/philosophers rather than the realist philosophers (only). the second of the above two reasons for demanding objectivity is more likely. Is it possible to ensure the interests of customers of financial institutions without setting ethical standards that are impossible to meet? Instead of demanding objectivity, ethical codes of conduct should include a demand for acting according to the customers' interest. However, there are two challenges to this approach.

First, even though banks and financial institutions deliver useful services, their interests are sometimes at odds with those of the customer. Apart from the obvious conflicts (e.g. banks want their commission to be higher, customers want to see them lower), there are also a few epistemically interesting cases. For example, a bank analyst is likely to estimate company's creditworthiness in a conservative way in order to reduce the risk to the bank. The company's management, in contrast, in planning to build a new factory, will prefer estimates that reduce the interest rate they have to pay on borrowings.

Second, it is a pity that the question of whether codes of conduct should be followed remains open. Even though a lot of water has passed under the bridge, we still do not know if people are individuals driven by the moral principles described by Adam Smith (2005) in *The Theory of Moral Sentiments* or, on the contrary, profit-focused *homo economicus* as described in *The Wealth of Nations* (Smith, 2003). Since the latter possibility cannot be eliminated (not to say that it is more likely based on common sense), a better solution for the problem described in the essay is to reform institutions in such a way that the interests of bank clerks and financial advisors are aligned with those of their customers.

Financial sector personnel should not be required to be objective, but should be incentivised in such a way that their earnings depend on customers' profit (in the case of financial advice) or on the efficiency of their decisions (when, for instance, estimating creditworthiness). Once implemented, this approach would most likely resolve the problem of impossible-to-meet demands the of objectivity and the provision of 'true' information. This approach would also omit the question of whether ethical standards shape human behavior. Reforming the remuneration system in the financial sector and removing the demand of objectivity from ethical codes would help favor those analytical methods and models that would be conducive to arriving at such results that would be most beneficial for both financial institutions and their customers. And these results, according to the terminology coined by Milton Friedman and Ludwik Fleck, will be true.

## References

Abolafia, M. (2001). Making markets: Opportunism and restraint on Wall Street. Cambridge, MA: Harvard University Press

Barber, B. et al. (2001). Can investors profit from the prophets? Security analyst recommendations and stock returns. *The Journal of Finance*, 56(6), 531-563.

Certified Financial Planner Board of Standards (2016). Code of Ethics and Professional Responsibility. Retrieved from: <u>http://www.cfp.net/</u> <u>for-cfp-professionals/professional-</u> <u>standards-enforcement/standards-of-</u> <u>professional-conduct/code-of-ethics-</u> <u>professional-responsibility</u>.

CFA Institute (2014). Code of Ethics and Standards of Professional Conduct. Retrieved from: <u>http://www.</u> <u>cfapubs.org/toc/ccb/2014/2014/6</u>.

Fleck, L. (1979). Genesis and Development of a Scientific Fact. Chicago: The University of Chicago Press.

Friborg, O., Martinussen, M. & Rosenvinge, J. (2006). Likert based vs. semantic differential-based scorings of positive psychological constructs: a psychometric comparison of two versions of a scale measuring resilience. *Personality and Individual Differences*, 40(5), 873-884.

Friedman, M. (1953). The methodology of positive economics. In: M. Friedman, *Essays in Positive Economics*. Chicago: University of Chicago Press, 3-43. Gaarder, J. (1994). Sophie's World, Paulette Møller (trans.). New York: Berkley Books.

Goldfarb, R. (1997). Now you see it, now you don't: emerging contrary results in economics. *Journal of Economic Methodology*, 4(2), 221-244.

Herndon, Th., Ash, M. & Pollin, R. (2014). Does high public debt consistently stifle economic growth? A critique of reinhart and rogoff. *Cambridge Journal of Economics*, 38 (2), 257-279.

JPMorgan Chase&Co. (2016) Code of Conduct – It Begins with Me. Retrieved from: <u>https://www.jpmorganchase.com/corporate/ About-JPMC/document/code-ofconduct.pdf</u>.

Kanner, B. (1981). Coke vs. Pepsi: the battle of the bubbles. *New York Magazine*, 14(39), 5.10.1981, 21.

Keynes, J. (1971). A tract on monetary reform. In: The Collected Writings of John Maynard Keynes, New York: Palgrave McMacmillan.

Krugman, P. (2013), The Excel depression., *The New York Times*,18 April. Retrieved from: <u>http://www. nytimes.com/2013/04/19/opinion/</u> <u>krugman-the-excel-depression.</u> <u>html? r=1</u>.

Lawson, T. (1997). Economics and reality. London: Routledge.

Mäki, U. (2011). Scientific realism as a challenge to economics

(and vice versa). Journal of Economic Methodology, 18(01), 1-12.

Maziarz, M. (2017). The Reinhart-Rogoff controversy as an instance of the 'emerging contrary result' phenomenon. *Journal of Economic Methodology*, 24(3), 213-225.

McCloskey, D. (1983). The Rhetoric of Economics. *Journal of Economic Literature*, 21(2), 481-517.

McCloskey, D. (1998). The Rhetoric of Economics, Madison: The University of Wisconsin Press.

Miguel E., Kremer, M. (2004). Worms: identifying impacts on education and health in the presence of treatment externalities. *Econometrica*, 72 (1), 159-217.

Niiniluoto, I. (2002). Truthlikeness and economic theories. In: Fact and Fiction in Economics: Models, Realism and Social Construction, Mäki U. (ed.). Cambridge: Cambridge University Press, 82-105.

Plato (2000). *The Republic*, Ferrari G., Griffith T. (eds.). Cambridge: Cambridge University Press.

Reale, G. and Catan, J. (2003). A history of ancient philosophy I: from the origins to Socrates, Albany: SUNY Press.

Reinhart, C. and Rogoff, K. (2010). Growth in a time of debt. *American Economic Review*, 100 (2), 573-578.

Rorty, R. (2009). *Philosophy and the mirror of nature*, Princeton: Princeton University Press.

Smith, A. (2003). *The wealth of nations*. Oxford: Oxford University Press.

Smith, A. (2005), The theory of moral sentiment. San Francisco: MetaLibri.

Tegmark, M. (1998). The interpretation of quantum mechanics: many worlds or many words?. *Progress of Physics*, *46* (6-8), 855-862.

Zaremba, A. and Konieczka P. (2014). Skuteczność rekomendacji maklerskich na polskim rynku akcji. Zeszyty Naukowe Uniwersytetu Szczecińskiego, 803, pp. 573-581.

ZBP (2013).Kodeks Etyki Bankowej (The Polish Bank Assosiaton Code of Conduct). Zwiazek Banków Polskich. Retrieved from: zbp.pl/public/repozytorium/ dla bankow/prawo/komisja etyki bankowej/KEB final WZ.pdf