Collected Papers
of
Lord Soumadeep Ghosh

Volume 34

The scientific paradigm

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the scientific paradigm.
The paper ends with "The End"

Introduction

I'm both religious and a scientist, so when I talk about the scientific paradigm I'm not a layman. But whereas most scientists in the world are specialized in their own niche field, I'm a polymath with knowledge of many fields including the classics, the physical sciences, engineering, the social sciences, the humanities and religion, each of which has their own paradigm.

As of this writing, the scientific paradigm is both popular among intellectuals in the world and produces useful scientific results. But generally, what is the scientific paradigm? In this paper, I describe the scientific paradigm.

Definitions

The basis of the scientific paradigm are population, sample, hypothesis, methodology, testing, validity and reproducibility. As of this writing, all seven terms don't find exact consensus, even among scientists of the world. Thus every scientist would be **myopic** until the definitions are agreed upon. Therefore, we begin by defining those seven terms as generally as possible:

1. **Population**: Any set of elements that is to be studied using the scientific paradigm.
2. **Sample**: A small yet representative subset of the population whose study using the scientific paradigm is equivalent to studying the population using the scientific paradigm.
3. **Hypothesis**: A specified claim to knowledge about the sample that is to be either accepted or rejected.
4. **Methodology**: A specified means to obtain knowledge about the hypothesis from the sample.
5. **Testing**: The use of statistical test(s), specific and well-suited to the methodology, that has/have the power to produce a **scientific result**, which is either **acceptance** or **rejectance** of the hypothesis.
6. **Validity**: If and when the chosen methodology and testing produce identical or a majority of similar scientific results on different samples from the same population, then the testing of that hypothesis using that methodology and corresponding test(s) has validity.
7. **Reproducibility**: If either validity or invalidity, but not both, is consistently obtained using various mathodologies and corresponding test(s) by various scientists on the same population, the scientific result on that population has reproducibility.

The scientific paradigm

The scientific paradigm is the production of knowledge by the reproducibility or the non-reproducibility of valid scientific results on various hypotheses using various samples from various populations at different times.

The End

On value

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the intricacies of value and provide intuition on building economic systems that consider these intricacies of value into account. The paper ends with "The End"

Introduction

In previous papers, I've written on many economic and financial concepts including capital, money, wealth, cost, price, value and volatility. As of this writing, most of these concepts, which are objective, are easy to measure, transact with and act upon.

But value still remains elusive to comprehension and understanding, since unlike the remaining concepts listed above, value is subjective.

In this paper, I describe the intricacies of value and provide intuition on building economic systems that consider these intricacies of value into account.

Analyses of value

A succint but shallow analysis of value concludes that such an analysis can't be done using neither the concepts of cost and price nor the concepts of surplus and deficit. A more knowlegdable and thorough analysis of value concludes that there are essentially three effective methods to measure value:

1. Conversation and/or negotiation with the representative agent of economics.
2. Marketing and/or organizational research.
3. Psychological evaluation.

The first method is preferable to governance.
The second method is preferable to organizations.
The third method is preferable to the psychological economy.

The heirarchy of the models of value

The heirarchy of the models of value are mapped according to the party the methods are preferable to:

1. **Authorized models**: These models originate from the first method and so belong to the domain of governance and central banking.
2. **Managerial models**: These models originate from the second method and so belong to the domain of planning and management.
3. **Psychological models**: These models originate from the third method and so belong to the domain of psychology and behavior.

The End

Two authorized models of value

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe two authorized models of value.
The paper ends with "The End"

Introduction

In a previous paper, I've described the heirarchy of the models of value.
In this paper, I describe two authorized models of value.

Two authorized models of value

1. **The risk-avoidance model of value**

$$V(t) = V(t + \delta_\sigma)e^{\left(\frac{R(t+\delta_\sigma)}{R(t)} - 1\right)}$$

$V(t)$ is value as a function of time
δ_σ is time to risk
$R(t)$ is risk as a function of time

2. **The reward-seeking model of value**

$$V(t) = V(t + \delta_\mu)e^{\left(1 - \frac{r(t+\delta_\mu)}{r(t)}\right)}$$

where
$V(t)$ is value as a function of time
δ_μ is time to return
$r(t)$ is return as a function of time

The End

The three major whistleblowers of the Modi regime

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the three major whistleblowers of the Modi regime.
The paper ends with "The End"

Introduction

In a previous paper, I've described TREASON by Narendra Damodardas Modi against India.
In this paper, I describe the three major whistleblowers of the Modi regime.

The three major whistleblowers of the Modi regime

The three major whistleblowers of the Modi regime are:

1. The politician Rahul Gandhi
2. The warlord Soumadeep Ghosh
3. The intellectual Mani Shankar Iyer

The importance of their testimony

The testimonies of the three major whistleblowers of the Modi regime are each important in their own right:

1. Politician Rahul Gandhi's testimony is important because he is an aryan and the face of the opposition in New Delhi, the capital of India.
2. Lord Soumadeep Ghosh's testimony is important because he is the warlord of Kolkata, the former capital of India.
3. Intellectual Mani Shankar Iyer's testimony is important because he is a dravidian from Madras, the winter capital of India.

The End

The standard tick size

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the standard tick size.
The paper ends with "The End"

Introduction

In a previous paper, I've described two authorized models of value.
In this paper, I describe the standard tick size.

The standard tick size

The standard tick size is given by the equation

$$s = s\delta_\mu + (1 - s)\delta_\sigma$$

which can be solved for

$$s = \frac{\delta_\sigma}{1 - \delta_\mu + \delta_\sigma}$$

where
s is the standard tick size
δ_μ is time to reward
δ_σ is time to risk

Usefulness of the standard tick size

The standard tick size is useful not just to the timing of trades by traders but also to the regulation of markets. Financiers, bankers, traders and hedge fund managers will all find the standard tick size to be very useful to their respective professions.

The End

The time premium

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the time premium.
The paper ends with "The End"

Introduction

In a previous paper, I've described the standard tick size.
While most individuals know about the **time value of money**, there also exists the **money value of time**, which is characterized by the time premium.
In this paper, I describe the time premium.

The time premium

The **time premium** is given by the equation

$$s = \frac{\tau - s}{r_f + p_\tau}$$

which can be solved for

$$p_\tau = \frac{\tau - s - sr_f}{s}$$

where
s is the standard tick size
τ is time elapsed for a trade
r_f is the risk-free rate
p_τ is the time premium

The End

The ideal asset

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the ideal asset.
The paper ends with "The End"

Introduction

In a previous paper, I've described the inflation risk premium.
In a previous paper, I've described the asset premium.
In a previous paper, I've described the time premium.
In this paper, I describe the **ideal asset**.

The ideal asset

The ideal asset supplies the risk-free rate, the expected inflation, the inflation risk premium, the asset premium and the time premium.
Mathematically, we have

$$r_A(t) = r_f(t) + E[i(t)] + p_i(t) + p_a(t) + p_\tau(t)$$

where
$r_A(t)$ is the return on the asset as a function of time.
$r_f(t)$ is the risk-free rate as a function of time.
$E[i(t)]$ is the expected inflation as a function of time.
$p_i(t)$ is the inflation risk premium as a function of time.
$p_a(t)$ is the asset premium as a function of time.
$p_\tau(t)$ is the time premium as a function of time.

The End

Ghosh's ladder chart

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe my ladder chart.
The paper ends with "The End"

Introduction

Financial charts are useful to all individuals and organizations. My **ladder chart** combines the open, low, high and close prices along with two signals to give a financial chart that is **superior** to both the **candlestick chart** and the **OHLC chart**.
In this paper, I describe my ladder chart.

My ladder chart

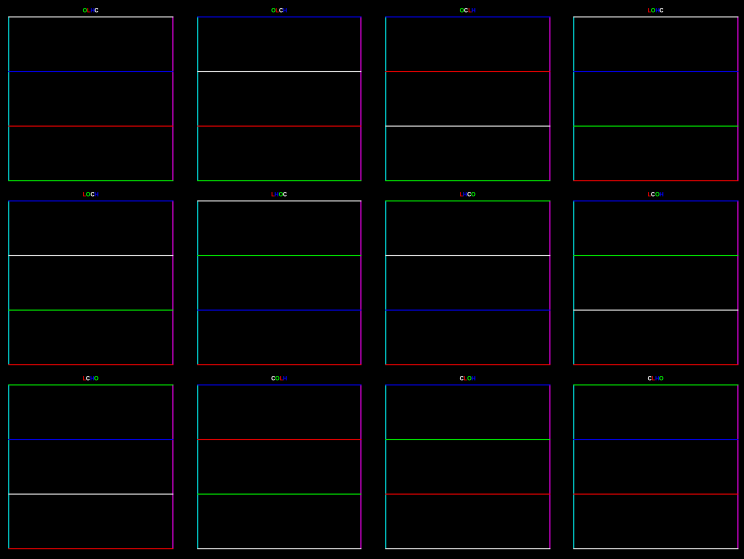
My ladder chart has **ladder** of **width** τ (the time elapsed for a trade), a **left colour** for the **first trading signal**, a **right colour** for the **second trading signal** and **four rungs** for the **open**, **low**, **high** and **close** prices.

Colours in the ladder chart

The left colour is cyan.
The right colour is magenta.
The open rung is green.
The low rung is red.
The high rung is blue.
The close rung is white.

General configurations of ladders in my ladder chart

There are 12 general configurations of ladders in my ladder chart as shown below:



The End

Structural economics

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe structural economics and apply structural economics to the global economy. The paper ends with "The End"

Structural economics

The **theory of economic gearing**[1] states that there can't exist more than 14 sub-economies in an economy with a **base of computation** and **currency** decided by **governance** in the economy.

There exist **14 solutions to population**[2] consistent with the theory of economic gearing.

There exist **alternative risk measures**[3] and a **risk structure**[4] that allows for the existence of up to 16 sub-economies in an economy.

Thus, the fields of economics, statistics and risk are solved.

The case of rejection of the theory of economic gearing

Suppose a sub-economy rejects the theory of economic gearing.

Then there exists an **alternative risk structure**[4] that allows a maximum of 2 sub-economies in the economy.

The **alternative risk measures**[3] also apply to this economy and there exist **2 solutions to population**[5].

Structural economics applied to the global economy

Since the **global economy** is an economy nevertheless, structural economics implies that we face 2 choices:

1. Co-existence of 14 sub-economies in the global economy with larger total population **versus** co-existence of 2 sub-economies in the global economy with smaller total population.
2. The **specific** solution to population for the global economy, whether large or small.

References

1. Soumadeep Ghosh - The theory of economic gearing
2. Soumadeep Ghosh - 14 statistical solutions to population
3. Soumadeep Ghosh - 2 alternative risk measures
4. Soumadeep Ghosh - Two risk structures
5. Soumadeep Ghosh - 2 statistical solutions to population

The End

Reduced-form economics

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe reduced-form economics.
The paper ends with "The End"

Introduction

The **real rate** r_r, the **risk-free rate** r_f and the **real risk premium** p_r are defined by

$$1 + r_f(t) + p_r(t) = 1 + r_r(t)$$

$$\iff$$

$$p_r(t) = r_r(t) - r_f(t)$$

$$\iff$$

$$\frac{1 + r_r(t)}{1 + r_f(t) + p_r(t)} = 1$$

Estimation of the three quantities

Estimation of the three quantities $r_r(t)$, $r_f(t)$ and $p_r(t)$ from only those three equations is not easy. But, in general, financial markets impose constraints on the three quantities that make the estimation of the three quantities easier with time.

Reduced-form economics

However, there exists another school of economic thought called **reduced-form economics** in which those three quantities are **planned** as much as **theoretically** and **empirically** possible.
For example, a **central planner** in a reduced-form economy may **impose** the condition

$$corr(1 + r_r(t), 1 + r_f(t)) = corr(1 + r_f(t), 1 + p_r(t)) = corr(1 + p_r(t), 1 + r_r(t))$$

and run the economy until an **unacceptable breakdown of equalities**,
after which a new central planner with a new imposed condition takes over and so on.

The End

Masterclass for would-be Sovereigns of the Modern World

Soumadeep Ghosh

Kolkata, India

Abstract

This paper is a Masterclass for would-be Sovereigns of the Modern World.
The paper ends with "The End"

Introduction

This paper consists of all the real and practical truths I've observed and understood as a life-long practitioner of Hinduism, economics, finance, psychology, law, political science, international relations and warfare. I know you'll find them incredible at first but helpful later on.

The real and practical truths

1. Krishna consciousness is the key to becoming and remaining a Sovereign.
2. It's better for you to be feared by many and loved by a few.
3. Don't jump the gun without knowing the ground truth.
4. Never kill a goose that lays golden eggs.
5. When a slave is to be set free, set the slave free.
6. Total security, even if and when you need it, is the first step to totalitarianism. Avoid total security and totalitarianism at all costs.
7. There's no such thing called national independence, only international interdependence.
8. Always give your oligarchs their freedom to speak, profit and act, and unless you both have a reason to not pay your taxes, always exact their taxes to the nation.
9. Great men and women are not born, but are made by the situations they're in.
10. As you age, theology is better for you personally and theocracy is better for the nation politically.
11. When it comes to computers, garbage in is garbage out. Data scientists are only as good as their data.
12. Raging against a foreign war machine will always lose to working with the domestic war machine.
13. When all else fails, push the nuclear button and call it a day.
14. If you can't embrace death like you embraced birth, your life as a Sovereign wasn't worth living.

The End

Philosophy

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe philosophy. The paper ends with "The End"

Introduction

Philosophy, also known as **the love of wisdom**, is the systematic study of the general and the fundamental questions, including itself. In this paper, I describe philosophy.

Philosophy

1. **The philosophers' ignorance and/or pretense**

   Since the philosopher **knows** at least **some** knowledge but **not** the **remaining** knowledge, the philosopher(s) **feign(s) ignorance and/or pretends**.

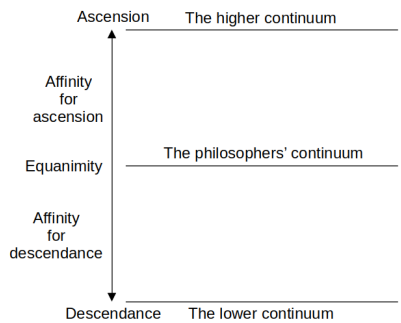
2. **The question of the skeptic**

   The question of the skeptic is "Do you know whether or not you are a brain-in-a-vat being fed fake experiences by computers run by your enemies?"

3. **The philosophers' continuum**

   Unknown to the philosopher, there are other philosophers pursuing philosophy that face the same questions, problems and fallacies. Some philosophers know the **answer** and/or **solution** and/or **workaround** to a particular **question** and/or **problem** and/or **fallacy** and the remaining philosophers don't. Thus, there exists **the philosophers' continuum** on which each and every philosopher stands ground.

4. **The philosophers' fallacy**



   The philosophers' fallacy is that every philosopher knows or can know the answer to each and every question/problem/fallacy in philosophy, which is false because there exist **higher and lower planes of philosophical existence** with superior and inferior **ethics**, **logics**, **moralities**, **epistemologies** and **minds**.

5. **The philosophical mission, the philosophers' problem and Hinduism**

   The philosopher realizes that **one philosophy can't fit all** and thus **propagandizes his/her/their/its own philosophy** as if it were **the philosophical mission**, thereby **causing the philosophers' problem** and therefore brings **all of philosophy** under the **purview of Hinduism**.

6. **The defeat of the purpose of philosophy and the philsophers' war**

   The philosopher faces **resistance** and/or **rejection** from other philosopher(s) who are opposed to his/her/their/its philosophy, thereby **defeating the purpose of philosophy** and causing **the philsophers' war**.

7. **Winning the philosophical war**

   Since philosophy is under the purview of Hinduism, one or more philosopher(s) **draw(s) and/or bring(s) to bear** his/her/their/its **philosophical weapons** to win **the philosophical war**.

8. **The win of philosophy and all philosophers**

   Since there is at least one philosopher with at least one philosophy that wins the philosophical war, so does philosophy and therefore so do all philsophers.

The End

Ghosh's war-time pattern-for-match of the risk-free rate

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe my war-time pattern-for-match of the risk-free rate in an economy. The paper ends with "The End"

Introduction

Warfare economics **requires** a **pattern-for-match** of the risk-free rate in an economy.

In this paper, I describe my war-time pattern-for-match of the risk-free rate in an economy.

My war-time pattern-for-match of the risk-free rate

My war-time pattern-for-match of the risk-free rate is

$$\frac{r_f}{1+r_f} = a(r_e - r_f) + br_f + c$$

where
r_f is the risk-free rate
r_e is the return on an **enemy asset**
a, b, c are the **war-time coefficients** to be estimated from war-time sample data

Use of my war-time pattern-for-match of the risk-free rate

Increase in the $\mathbf{R^2}$ of the estimation of my war-time pattern-for-match of the risk-free rate is interpreted as **confidence that war is on**.

Increase in the significance of the estimated war-time coefficients a, b, c is interpreted as **increase in intensity of the war**.

The End

Three orders of logic

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe up to three orders of logic. The paper ends with "The End"

Introduction

Most individuals are capable of thinking up to only the zeroth or the first order of logic. Thus, there is demand for knowledge of the higher orders of logic. In this paper, I describe up to three orders of logic.

The zeroth order of logic

The zeroth order of logic states

1. Inertia is the natural state of almost all individuals.
2. If something isn't broken, don't try to fix it.
3. When there is no clear path to take, doing nothing is a good idea.

The first order of logic

The first order of logic states

1. Unless acted upon by a force, internal or external, almost all individuals continue to be in inertia.
2. Initiatory force is the basis of all actions.
3. For every use of force, there is a reaction, internal or external.

The second order of logic

The second order of logic states

1. When force acts upon an individual, there is always an opposite force.
2. Force and opposite force are the basis of equilibrium.
3. Imbalance of force and opposite force is the basis of inequality.

The third order of logic

The third order of logic states

1. All advantages to be gained depend on causing inequality.
2. Causing inequality is both karma and effect.
3. All advantages or disadvantages are due to karma and effect.

The End