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THE PRINCIPLE OF PROFIT AND LOSS REVISITED

THE WESTERN ECONOMIC SOCIETY AS A FAILING CORPORATION

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ABSTRACT

Most economic systems and theories follow the well-known principle of profit and loss. It is still considered being the right base. However, the banking crisis, suicides due to extreme labour conditions, global pollution and other related outcomes and effects show, that all economic theories have failed. They have failed to provide any adequate solution for the large discrepancies in welfare between different societies and countries. Moreover they were not able to guarantee stability. Contemporary observations show that our basic attitude to trade and commercial systems has caused a complete spiral-ling down of 'Western' society. An in depth analysis of the well-known profit and loss in a global perspective system is presented. Initially, profit and loss is meant for an equivalence in trade of goods and services. In stead of that we find disasters few are found to admit.

Obviously the actual profit and loss principle has led to a contracting society due to a form of stockpiling, blocking any further progress in stead of expansion ensuring large equivalency in exchangeability in real value. Actually, it exhausts available resources and produces large pollution and social disharmony, which might end up in revolutions or uprising.
Aspects of market offer and demand, resources and economic activities are converted into terms of a flow of energy, with help of proposed equivalence between money and energy. Although apparently irrational, for an immediate global survival, the reversing of the so-called net momentum of the energy flows might be the right solution.

INTRODUCTION

The alarming and dramatic economic situation, in which we find ourselves today, requires raising a fundamental discussion, concerning the worldwide-accepted economic principles of profit and loss. Most of which are termed Western civilisations is heavily involved in technological endeavours of trade, commerce, business and marketing. It is observed that our whole planetary society is based on it and it is precisely those endeavours that tie us all together internationally 24 hours per day, 7 days a week, whatever the cultural background, religion or region. The status of the Euro - introduced January 1 2002 - is an example how a limited number of countries are tight together, in great extend. It are also those endeavours that keep any door open between people, whatever country to country or nation to nation, because only profit matters, and money talks always. Further, it seems that we have set ourselves on a course of economic, psychological and moral destruction like a fast moving train downhill with no brakes and no escape. Why this is true will be explained in the following paragraphs with help of some simple observations.

To illustrate the dramatic situation, just look at the large differences in income per head per annum between different countries, the extreme pollution of large areas, the forest devastation, the continuing collapse of the banking and money system and the large loans of the underdeveloped countries which they never will be able to pay back. Also the large national debts of the so-called civilised countries are unbearable debts for a number of future generations. So are the burden effects of mortgage loans with an intrinsic reliability zero, given to people without any income.

In this respect we can already consider the outcome of our economic system as most unstable, outdated and useless. Obviously, the Western society may be considered as a failing corporation. The alarming circumstances require to starting again a fundamental discussion about our economic system and the underlying principles. In essence the output of our economic system is always based on the profit and loss mechanism we all are so much used to.

The Profit and Loss principle describes a financial statement that summarises the revenues, costs and expenses incurred during a specific period of time - usually a fiscal quarter or year. The Profit and Loss principle statement is also known as a "statement of profit and loss", an "income statement" or an "income and expense statement".[1] Profit and Loss is always expressed in a chosen currency standard, this asks also for an analysis of the nature of money.

After presenting some main characteristics of the present system, an analysis is given of the nature of money. Then the profit/loss system is investigated in more detail. It appears to be possible to convert all commercial actions into terms of an energy flow, whatever its form or representation is. With help of this energy flow model, it is shown that never any future problem ever will be solved in a global persp-ective, if we continue hanging onto the existing economic system.

[1] Wikipedia

The question of sustainability of any system requires the treatment of the principle of feedback. Any economic theory or model proposed in the past has appeared to be a parameterised subjective opinion connected to the person / organisation presenting it.[2]

Further we discuss the nature of trade, commerce and business and the causes and effects of the Profit and Loss principle in terms of energy flow. Finally, we end up with the question: What happens when conditions of the energy flow are reversed or at least balanced?

CHARACTERISTICS OF OUR ECONOMIC BEHAVIOUR, PHENOMENOLOGY

The following examples illustrate the main characteristics of the economic 'atmosphere' we live in today. General characteristics are greed, arrogance and denial.

1. For most people and corporations it is simply true that they want to be rich. They have to be rich because prosperity sells, it offers power and justifies behaviour. But at the same time almost all of our religious precepts point at the same ugly thing, that wealth and prosperity are the devil's way of keeping us from God. It is also observed that wealthy people possess power. Often a connection is made between these two aspects to justify this fact of life.

2. From a historical perspective, and those entities, which desired to control us, we need only to think of the monarchs and dictators who possessed and amassed all of the wealth energy for them. How do these leaders control a society that also subjugated itself to them? They often were used to say that people were not supposed to have money because it's tempting and it's wrong. It takes us away from God and so on. But, the bottom line is that there are a lot of people, who admit they want to be rich, very rich, but yet they hate anyone who has money. Is it propagating feelings of fear and guilt?

3. With regard to a political and national perspective, for all nations and governments, there is the ancient dilemma of how to resolve and *control* the big differences between rich and poor. For instance, how do we resolve the simultaneous existence of wealth and absolute poverty resulting in worldwide starvation?

   Communism was one idea, and there have been many others. But it never worked! No matter what we do, or try to do, it never seems to work. What is observed as a result of the economic system in the Eastern and Western European countries is definitely a dramatic and disastrous outcome of a failing

[2] Hoe wetenschap plots een meninkje werd, Abraham de Swaan, NRC, 30 oktober 2008. Echte Economie, Arnold Heertje, Valkhof Pers, 2006

system producing non-sustainable results.

4. Should the poor always be with us, as is so often said? Why is this? Where does it come from, and why is it so widely accepted?

   A fundamental and philosophical consideration reveals, that mechanism of *fear and guilt* is often implicitly connected to all these kinds of statements represented and expressed in many religions. Or put in another way, how often are moral decisions taken based on fear and guilt. They are imposed with regard to what we might expect to occur?

5. Other examples are so-called usury policy affair scandal (in the Netherlands) and other investment project failures, where in time the client is completely sucked out.[3]

6. Examples are also found within the oil industry, where profit and shareholders value surpasses any environmental aspect and consideration. How often is the rule pay now and save later true.

7. What about poor labour conditions where people commit suicide to escape from it.

The illustrations characterise a macroscopic attitude and outcome of economic behaviour. Striking underlying personal driving forces are greed and sexuality, the hunger for power and money, which easily can be recognised as pitfalls in many circumstances. Here the reliability of persons, institutions and individuals comes into scope. Reliability of a process or system is determined by its intrinsic characteristics but also by external circumstances. Where a smart looking lady is interfering in business relationships, even a secretary of defence might fall in love (with unforeseen consequences. Note that reliability is defined as the chance that a system, process or person will still function after a predefined period of time within its predefined specifications.[4]

THE NATURE OF MONEY

Money is the nearby reason we do almost everything we do. To get more of it, regardless of its sources and evils, is a very high priority of life. For most people it is the number one priority, because without it they don't even survive. In most societies and economic systems it is the focal point of behaviour. For others, money is the vehicle to immaterial goals / desires. Therefore, it is worthwhile to consider the fundamental question: What is the nature of money?

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[3] De woekerpolisaffaire, Kees Koomen, 2010 ISBN 978 90 468 0729 3, uitg. Nieuw Amsterdam.
The Madoff affair and others.
Opkomst en ondergang van de DSB bank, Natasja de Groot, Ronald van Gessel, uitg. Carrera Amsterdam, 2009.

Electronic Measurement systems, Theory and Practice, CH. 5, IOP 1996, A.F.P. Van Putten, ISBN 0 7503 0339 5.

The first question is: why does it *never* work satisfactorily in the long run? Usually, money is understood as the means to fuelling any economic system for trade and commerce exchanging goods and services. A first explanation why money doesn't work may be that money is often perceived as an end in and of in itself. Getting more of it is the final goal to solve *all* problems. In some extend this is true. Many practical problems can quickly be solved, in particular when small projects in underdeveloped countries are at stake. But on an international global scale it lacks sustainability and perspective.

In practice: for most organisations and companies making and maximising profit is the main objective. That's where it starts and that's where it ends. This is an intrinsic impossible objective, because money being a mean can never be an aim in itself. Furthermore, for many people it is a strong belief, that once we have that money, all problems vanish and we are free. But free to do what?

To investigate the nature of money in more detail, it is observed that a lot of things have no value, except the (sometimes virtual) value we put on them. This is known as the mechanism of *perception***. P**erception is defined here as parametric knowledge, based on personally bound circumstances, time and cultural dependent. More formally, perception is defined as the intuitive recognition, appreciation or insight retrieved from an observation, henceforth personally bound and under certain conditions accepted by large groups and even countries[5]. Pure knowledge is defined as concepts retrieved from nature law, independent of the observer. It is independent of any person, circumstances, time, place, or whatever. The law of gravity is a good example of nature law.

Money is an example of something that has no value in itself but has been assigned a value based on perception. It has been devised as a part of our trade system based on *confidence,* and mutual agreements with respect to some arbitrarily chosen *standard*[6]. How we look to it is a matter of (double) perception: trust in the agreement and in the standard. Nevertheless, often we have defined it as a basic element of the economic system. Money is not derived from or caused by nature laws, but man-made and therefore highly vulnerable to changes and political influences. For example the European Monetary System (EMS) is based on forced agreements introduced by 12 member states of the European commission, January 2002, including an exchange rates of the old ‘worthless’ currencies with a 10% loss.

In the past different cultures have accepted other standards of payment systems, and these have also proven to be viable for some limited time only. Salt, shells, land, furs, weapons and cattle were used as part of a trade system; then replaced by gold or food. In later time / centuries the next step was the following: "you perform this service or provide goods and, rather than giving you a brick of gold, I will give you a piece of paper that represents the piece of gold I would have given you".

But, because the supply of gold is limited, it was not possible to ongoing indefinitely

[5] Examples are different religions and currency systems.

[6] The golden standard is the most well known reference, but in history the status has changed many times initiated by political decisions. For a comprehensive disclosure see Wikipedia.

printing those pieces of paper representing a value in gold. So the golden standard became obsolete and was partly abandoned in 1925 -1931 in the UK[7] It appeared, there never was enough gold to pay for all of it. Banknotes were introduced, initially based on a modified golden standard, and finally 'plastic' money representing figures in a bank account. It is interesting to note that the idea of plastic money was already invented in the nineteenth century, using a card to make purchases. This idea, which was first thought of by Edward Bellamy in 1887.

Then a new game was invented that says, it is alright *to "charge" or own* things, which we do not immediately have the finances to pay for. Taking out big bank loans and creating massive debts, are two prime examples of this principle, but dangerous with a high failure rate. The dramatic outcome of this behaviour is found now in the international banking crisis, the huge mortgage loans given to people without any guaranteed income and finally ending up now in a deficit crisis between countries with astrophysical dimensions. All this behaviour is based on *pure assumptions*, what is accepted as part of the trade system in good confidence. The odds still are that we expect to get the – already spent - money eventually and will be able to pay it back later on. But this immediately leads to the question: How are we going to pay back the huge debts with interest? The present situation makes these questions most relevant and the answers most doubtful, because all confidence is vanished[8].

On what base we think that it is possible to earn or claim it and to pay back in some way? Via our homes, our real estate, or the other goods, for which we are charged? Of course, it can be paid back with just another piece of paper with printed numbers on it, for instance a cheque. Again this is not reality, but merely an *assumption* based on probabilities. Hence, it may be concluded it is just a matter of perception of something that doesn't exist. In this same respect the current *trade* in debts of the (underdeveloped) countries may be placed in the same virtual context. As said previously, the most striking examples are the trade in mortgage loans packed and sold in packages with extremely high risks, with an intrinsic value of zero, like the tulip bulbs trade in earlier times.

If we were only to admit that we are, concerned about many people won't be able to play that game anymore. But what causes / gives us that fear? Probably, the reason we are all so miserable about it is, that no-one will admit to have been playing this same game over the passed years. Of course, the real truth of this game is denied, until the system collapses due to its intrinsic lack of sustainability and lack of built-in securities.

This leaves one conclusion: apparently the whole system *has been so far* ***a big denial and cover-up!*** There was no back-up at all anymore. We were dealing in illusions and assumptions and still are doing so. This is proven now day after day, year after year [9]. The banking crisis, the deficit crisis between countries and the

[7] A comprehensive historical review of differing golden standards is found in Wikipedia.

[8] Greece will never be able to pay back the huge loans and connected interest due to an intrinsically failing society, based on wrongly chosen presumptions and almost criminal lies.

[9] The Madoff affair, is a fraud system based on a pyramid of lies and so were many other promising investment projects.

expected collapse of the Euro currency system are illustrations of dealing in illusions.

If people really want to play the game, they should not be so afraid to admit it. When people say "we are going to pursue or gain money", they are coming to the end of the road very quickly; if their only desire is to *stockpile* money and just get more of it. It is easily recognised that this behaviour is strongly connected to *emotions*, feelings and perception. Then the following important statement is applicable: this behaviour is connected to *pure emotion and lack of any morality or responsability.*

Apparently, pure feeling is the starting point from which everything else and all changes come forth.

In essence all human activities originate from feelings. No simple rational thought has ever been able to replace this. Emotion is the motivating factor that wholly dictates success or failure in terms of prosperity. This can also be observed from examples of men and women active in all kind of relationships, disciplines and sciences, all over the world. In all these variations, the principle of profit and loss is always hidden in terms of what can I get out of it.[10]

For centuries it is accepted that we can go on with the mentality and habits of monopolising, defending and protecting markets. Being prosperous, means to most people: accumulation of currencies, and money, with the perception the bigger the pile, the more prosperity, the more power and social status, the more happiness / satisfaction and the more self-rightness is retrieved from it. In our economic system these piles of money are used as the reference points for prosperity or the lack there-of. This implies the need of an endless competition producing / including winners and losers. We have also introduced a ranking system to making comparisons to get it clearer.

THE PROFIT - LOSS SYSTEM IN TERMS OF ENERGY

To investigate the nature of the profit-loss system in a different perspective we connect the mechanism to a flow of energy. As noted previously the starting point is the existing economic system linked onto the mechanism of profit and loss in general expressed in money describing costs, investments and revenues to ensure equivalency in real value between trade partners.

It appears to be possible to converting all economic actions in terms of a flow of energy, whatever its nature or kind of origin. It is also noticed that the system of profit - loss inherently may cause a form of *stockpiling* of energy in some materialised form, either in currencies, shares, a bank account or gold bars.

What we want to do here is assigning a certain amount of energy to every trade action expressed in the units of energy of Mega Joules (MJ). It is easily seen that performing trade actions contains always a flow of certain forms of materialised

[10] Note that always exemptions on this rule exist, such as the initiatives taken by Dominique Lapierre and mother Theresa.

physical energy, either goods, money or services.[11] In general, each specific action requires an exchange of a number of different types of energy, where their appearance and magnitude may differ dependent of the character of the trade action. For instance, air transport of goods requires mechanical, electrical and thermal plus human energy. Thus, the 'value' of this transport is the equivalence of the energy used.

The conversion factor between money and energy can be derived from a simple daily relationship as follows. A US barrel of crude oil equals an average amount of energy of 159 x 46.3 x 0.9 = 6.625 MJ.[12] One barrel of oil, based on a price level of $ 86,00- (May 2010) represents an amount of thermal energy of 6.625 MJ, so one US $ represents 6.625 / 86 = 77 MJ of energy (1 US $ ≡ 77 MJ).

This means that each money flow can be converted into an energy flow. In this respect although a daily fluctuation of crude oil prices exists, any money flow can be converted in a varying energy flow expressed in MJ.

A person, a business unit, or an organisation can process and modify the input energy into other different forms. So manufacturing cars can be expressed in money and in energy. Any type of product made, or services provided, can be expressed in terms of a money flow either in an flow of energy.

Using the concept of energy flows provides much more flexibility in dealing with different type of processes and its efficiency in terms of profit and loss. In this respect we can introduce the concept of interchange ability between money and energy. It is noticed that energy is the beginning and cause of all existence and it provides us with the potential to dealing with information in all its representations.

TRADE, COMMERCE AND BUSINESS

We introduce here the following definitions for trade, commerce and business.

TRADE can be defined as the *exchange* of energy, expressed in goods or money, among entities of any given sphere of life as a function of a relationship to one another. So trade is an action between at least two partners. This can occur on the level of individuals, corporations, nations and countries.

COMMERCE is defined as the *movement* of substantial things, whether it be money, gold or items. Hence, it is also an energy demanding action connected to the movement of substantial things.

BUSINESS is the activity of *giving something in particular in exchange for something*

[11] Actually, six different forms of physical energy exist: i.e. thermal, mechanical, radiant, electrical, magnetic and chemical energy to be distinct of human energy or spiritual energy.

[12] 42 US gallons (34.9723 imp gal; 158.9873 L) and 1kg crude oil represents about 46.3 MJ; specific density of crude oil 900 kg / cu m at a given temperature. MJ stands for Mega Joule as a unit of energy.

else. It is the activity of buying and selling things and it was originally intended to be a resource.

This sounds pretty sensible but currently it is observed that structures of trade, commerce and *free* enterprise are falling apart. Existing structures are in a mode of self-destruction. Our systems of economic support are falling away on national levels, international levels and indeed also on individual levels. The market is poisoned with trade actions without any intrinsic value. We will come back to this later on.

Actually, there is nothing to trade with any longer, except imaginary pieces of gold that don't exist. It started off with "Let us pretend that gold is a mean of trade", but then, we ran out of gold, because the game got to big and now we don't have enough gold to play anymore. So it is said: "Let us pretend that it will be there in the future and let's trade on that *assumption"***.** We have called it credit and now are trading in debts. But the main question is this sustainable and why is something wrong?

We can't really pay back, because there was never anything there in the first place. It really looks like a game of incredible pretence and almost everyone is astounded when it doesn't work out! So what are we trading on and with what? We assume a lot of things that aren't there basically. We have taken it so far that the entire foundation now is crumbling at our feet and nobody knows what to do about it. Where are the answers?

We just have to look around how specific companies and nations work and trade fighting permanently to protect their markets and to maintain their profit stockpiling attitude. This is what can be noticed, but understandable nobody will admit.

Now let's go back again to business and ask what is in essence the purpose of business as an activity of exchanging entities? It was always assumed that it should be **a *trade to be even in nature*, as what it is meant for originally**. What was said initially, it should be of an *equal* exchange between two entities. But what practically is truly intended is to end up with maximising the gain: to get *more* back than we have put in. This is exactly the behaviour what we already expressed in terms of energy. It is called the net result of the difference between the in flow and outflow of energy here connected to trade actions. Today, it is often seen that the flow of profit is a one way ticket.

The conclusion must be, that we are starting with a blatant contradiction and a LIE! We are doomed before we even begin, because if truly there were to be an ***even*** *exchange between the trading partners the perception is we would not get anywhere?*

NOT by our accepted philosophies, and not by our perspectives and perceptions.
It is stated that this *one simple perception* has caused all the difficulties. It is the one initial lie as to what is our basic intention. It is the same thing on any level whether it be owners, presidents, CEO ‘s, managers, nations, employees, farmers and so on. We all set out for what we refer as an *even* exchange and yet we all have in mind: "I have to get more back than what I have put in? out". That is what profit in practice is all about and this behaviour accomplishes fully the previously given contradictions. Is

it possible to verify these observations?

THE FLOW OF ENERGY IN TRADE, COMMERCE AND BUSINESS

Once economic actions are converted into an energy flow it is also possible to connect a *direction* to the net energy flow. Doing business means an even exchange between money and energy in different domains. We illustrate this.

For instance, buying an automobile at a price of $18.000,00, implies a flow of energy from the buyer towards the vendor of 1,386,000 MJ. (2010) The buyer gets a car to drive with, converting gasoline into thermal / mechanical energy with a certain efficiency covering distances. The difference between input energy and available useful mechanical output energy is the loss of energy, dependent of the type of transport mechanism and the cars efficiency. The environment is charged with the total amount of input energy. The ratio between the difference between input and output energy and total input energy, the net energy, is called the overall efficiency.

A trader in bank loans sells a package of mortgages for a price of US $ 1 billion of which he is aware that actually no intrinsic value is connected to it. For the vendor this means an inflow of $ 1 billion representing an inflow of energy 77×10^{9} MJ. The buyer hopes at least for the same amount of inflow of energy until he discovers that the efficiency of his trade action is zero, because there exists no ROI. *This one time action implies the buyer's energy is completely lost into a stockpiling action by the vendor without any counter value.* It is a one way action maximising profit in the extreme. The outcome and sustainability of this type of trade actions is zero producing an epidemic global poisoning of the financial market.

This type of stockpiling actions can be compared with a non-rotating black hole[13]: energy is going in and nothing is going out. This mechanism leads to a contracting society reducing opportunities for expansion.

Expressed in more technical terms of sustainability and stability; zeroes and poles are introduced in the financial market, which can bring the whole system to a stand-still or implosion when these conditions are fulfilled.[14]

Is this approach helpful? Energy is an underlying general commodity for all actions and can be considered as is the beginning and end of all being. Secondly, energy is the beginning and cause of all existence, a driving force by which all things happen. It is also the reason why energy is a means and can never be an aim in itself. Further, energy can represent any type of action or mechanism, whatever its origin. Under much other type of energies, money can also be considered as a representation of energy to which a unit of energy can be assigned based on a daily rate. To investigate in more detail what this implies firstly, we discuss one of the most crucial requirements for sustainability of any type or system.[15]

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[13] Note that also rotating black holes exist with an outflow of energy.

[14] Poles and zeroes are the critical events of a system at which the system stops functioning when occurring.

[15] AFP van Putten， The Sustainability of the Western society. On the reliability of policy and finances; 2009, publ. Stichting Hollandpromote.com; ISBN 978-90-813712-*1-6* .

FEEDBACK AND THE PRINCIPLE OF PROFIT AND LOSS

Although the concept of feedback is common and well known, its impact is often overlooked and cannot be underestimated or even neglected. Feedback is one of the most fundamental and important principles found in nature, in engineering sciences, in all other kind of disciplines i.e. economics. In all sustainable processes and systems a kind of efficient feedback must be present to guarantee sustainability and safety. In this context we consider the principle of profit and loss.

Feedback is defined as the return action via which a part of the output of a system is connected to the input of that system, effecting the characteristics of that system / process.

With help of a separate so-called feedback loop, the input and output of a process are connected to each other. Connections with the input and output are made with appropriate interfaces, ranging from purely technical towards, only natural, human or institutions such as e.g. the SEC and the DNB. The feedback loop is a system in itself. The combination represents a so-called closed loop system, having different characteristics with regards to the system *without* a feedback loop. The concept of closed and open loop may raise some confusion as will be explained later on. It can be shown that an appropriate feedback system improves and guarantees stability, accuracy, and sustainability of the process involved, whatever the type of process is.

A simple example of cycling illustrates the process. Consider cycling in open and closed loop. It is easily seen that when the cyclist closes his eyes, interrupting the closed loop, the process of cycling stops and the system will collapse.

The concept of feedback in its broadest sense can be transposed also onto political and financial systems, practically and partially closely connected to each other. In its broadest sense this approach is sometimes called cybernetics. Feedback is a fundamental requirement for all processes to obtaining stability. The concept of feedback for a political and financial system in its simplest form is illustrated in Figure 1.

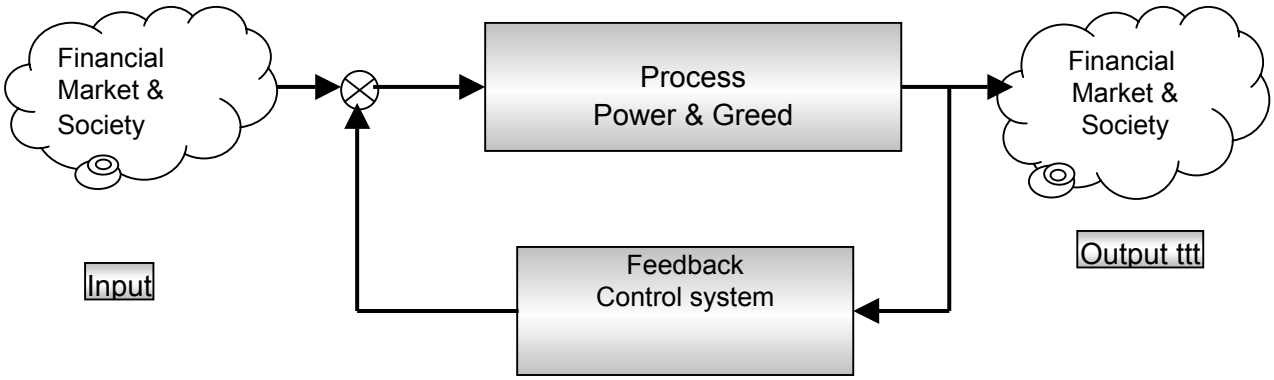

Figure 1. The closed loop system implies the use of a part of the output quantity fed back to the input with help of a second system. At the input, a so-called summing point is used where the of the output is connected to the input. For reasons of stability, the polarity of the output signal is reversed before it is connected to the input. The system including the feedback system may be considered as one integral system. Each system is embedded in its own environment.

Considering a political system, the Parliament acts as a feedback process for the Government. Here feedback consists of questioning, research, drafting documents, and proposing or adapting or agreeing procedures, laws, measures and budgets. These written documents and registrated decisions act as the physical representation of the feedback systems used. Clearly, this may occur in different energy domains and at different levels. Note that feedback is also dealing with information processing using energy. With this approach the operating and failing conditions of systems are investigated. An interesting case to study is the rise and fall of Margaret Thatcher as Prime Minister of the UK in the eighties (1979 - 1990).

Consider also the international financial crisis between banks. A total lack of feedback and control systems has caused this crisis. There was no feedback at all, neither from the government nor from the institutions, which were in charge for supervision.[16]

The operand symbol

To get a more in-depth understanding of this approach we explain the point where the part of the output quantity is compared to the input of the system denoted with a cross symbol. It is common practice that a circle with cross inside is used for that purpose, usually called the summing point. In general, it is an operand defined as a specific prescription to perform a certain task.

The symbol represents an operand and symbolises the action where the different data of input and output are *compared* with each other. The symbol is sometimes called an algebraic summing point. More precisely the operand acts as a *confrontation point* between output and input. It is just the process of confrontation, where different opinions, or observations, or aims or measurements should meet. For a more detailed mathematical treatment the reader is referred to the literature of control theory.

When in a closed loop system, one element in the loop is disconnected from the other components, the system will become out of control, will start to deteriorate, or to jam, and the target and / or desired outcome will never be reached[17]. In the event that a system starts to operate without any feedback, the system is called an open loop system.

Economic and Technical feedback

Concerning open loop and closed loop systems, an important note should be made to avoiding often arising confusion. In economic systems an essential distinction should be made between open systems and closed systems with regards to technical systems. In economic systems, an open system is defined as: "a system where the *global market* is part of the feedback loop. Economic closed loop systems operate isolated from their market environment. No external feedback is present with predictable results as is shown many times.

[16] The infamous trader Nick Leeson whose unchecked risk-taking caused the collapse of Barings Bank. See also *Jérôme Kerviel* French trader who has been charged in the January 2008 Société Générale trading loss incident, resulting in $ 4.9 billion loss. Source *wikipedia.org/wiki/*

[17] Cf. A failing altimeter was the main cause of a recent incident as part of a failing closed loop descending system in an air- plane and reporting system..

Consequently, in an open economic system, the market is implemented as an integral part of the feedback loop. In a closed economic system the market is (partially) eliminated from the feedback loop, which can cause huge disasters, recently shown by unrealistic mortgage loans to house owners.

In financial systems, banks are part of a process producing financial products generating an in - and outflow of money often totally initiated by human emotional behaviour only, such as greed, arrogance, and the evil bonus culture. Today the financial market acts allegedly as a world-wide feed back loop. Banks are part of that worldwide economic closed loop system. Conditions must be fulfilled to keep the process sustainable, and are determined by the operating characteristics of the system implemented and the type of feedback loop involved. Up to now the actual systems have shows a complete absence of feedback, causing vulnerability, poisoning the input variables and the system characteristics with lies, consequently affecting the sustainability of the whole system on a world-wide scale

Intrinsic and Extrinsic Feedback

To get more insight we introduce here also the concept of intrinsic and extrinsic feedback, because in practice these two types of feedback systems are found. Intrinsic feedback is present when the feedback loop is part of the system itself. Extrinsic feedback is present in systems, where the feedback is not a part of the system itself. Feedback can be intentionally and non-intentionally. The Nederlandse Bank (DNB) and SEC are examples of an extrinsic feedback system.

In case of e.g. political interference, indicated by the arrow, the performance of the system and hence the outcome can be severely damaged or changed.

In case of an intentionally extrinsic feedback system e.g. by law, it is a built-in feature to guarantee proper operation in order to obtaining the desired stability and goals. The market acts also as an important feedback element. Note that a non-intentionally feedback process may act on any sensitive point of the system which can cause severe interference. The Greece deficit act as a disastrous interference for the whole financial world caused by a failing extrinsic and intrinsic feedback system, which in its turn is caused by a failing infrastructure by law.

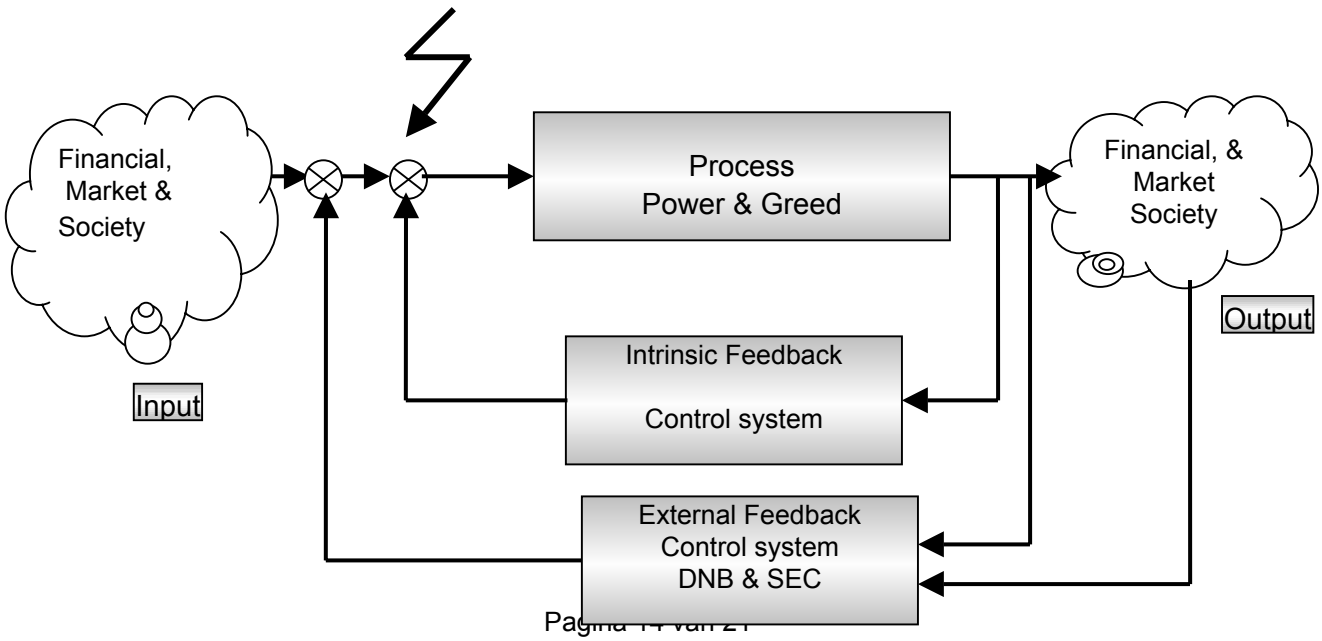

Figure 2. Diagram illustrating the concept of intrinsic and extrinsic feedback. The crossed circles represent the so-called summing points at the input. Intrinsic feedback is a built-in feature for feedback belonging to the process itself. Extrinsic feedback may be implemented by an outside system not being a part of the system itself. The market acts also as feedback process. Neglecting market feedback may lead to disasters.

When the feedback loop, either intrinsic or extrinsic is damaged or even eliminated, the system goes out of control. Just look already at what has happened to the different financial systems without sufficient feedback and control neither inside nor external.

Comparisons with aircraft accidents are also very illustrative. The concepts presented offer an excellent possibility for further analysis and actions / initiatives for making improvements. Risk analysis should be part of the analysis, putting foreword the question: what are the consequences if the system fails?

Outcome and Target

An outcome is any result of a process. A target is defined as any object or desired outcome aimed at (to be achieved), usually complying with a predefined plan. System, input, process, output, and target are distinguishable, non-identical but inseparable entities of a system.

A goal may be defined as: the realisation of a vision a person has before realising it. From the pre-set goal all system requirements and characteristics are retrieved. Note that the built-in relationship of the system between input, output, implies, that the same input quantities fed into the same system can generate a totally different output! For instance, the same materials fed into the same process can produce different type of cars.

Following the introduction, we now come back again to the main theme of the discussion.

The Present Outcome Of The Profit Loss System In Terms Of Energy

For stability and sustainability it is stated that the outflow of energy must equal the inflow of energy based on an even exchange for reasons of sustainability, whatever the representation is. In other words fair trade. When this is not the case, the system will start to jam, causing stockpiling, or chaos ending up into a bankruptcy status for one of the entities. This is illustrated as follows. We distinguish two kinds of energy flows**,** in particular: the inflow of energy and the outflow of energy.

A simple trade action between two entities (actors), vendor and buyer, illustrates the basic rule of an even and uneven exchange of energy flowing out in the form of goods or services and received by the other entity, the vendor sells goods, and the buyer, who pays for the goods and / or services.

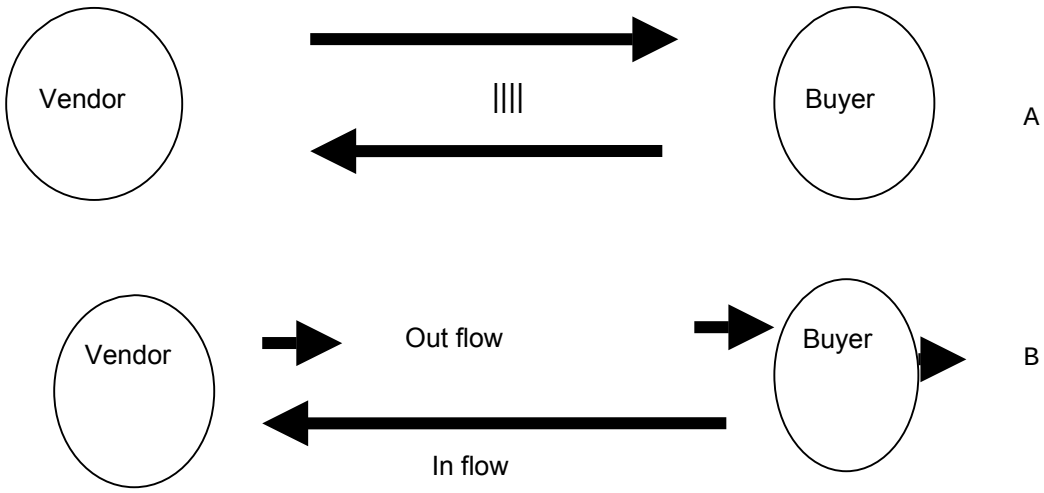

Figure 3 Even and uneven exchange of energy between entities, Vendor, and Buyer. Only in the upper case A sustainability is guaranteed ensuring equivalency in real value. In the lower case the vendor provides goods and / or services to the buyer in an uneven exchange lacking equivalence. The buyer receives an empty package (virtual value), which finally may result in bankruptcy for the Buyer. In case B mortgage banks to other banks sell loans without any intrinsic value. The potential outflow for the last bank in row may be zero. Dependent on the volumes involved banks can fall into bankruptcy.

In each trade action we distinguish two different entities the vendor and the buyer. Vendor and buyer are interchangeable entities. For each separate entity the inflow and the outflow of energy can be considered. For sustainability global trade should be a closed loop dynamic process with equal inflow and outflow of energies. When one entity in the loop is falling apart e.g. grasping more energy in than is going out, then sustainability may become in danger. Although this process can be extremely complicated in essence there is always a buy and sell action to be distinguished.

When an entity is acting like a non-rotating black hole grasping all the available energy in time then all passing energy is swallowed and no energy is going out any more. The recent usury policy scandal is an excellent example of a totally one way energy flow in time, where the buyer in the long run is cheated and left with worthless products based on intentionally inserted systematic high costs structures. These types of products were put on the market without any kind of control and supervision.

Every trader can act as a buyer and vendor. The actors can perform a push (put) actions or a pull (take) actions. A 'push action' is performed when a product, or services is introduced on the market. A 'take action' is defined as the gaining action receiving the assumed equivalence of the put action. Both actions together form one complete trade action, which should be even for sustainability. ‘It is noticed that invisible’ costs can result in a loss or bankruptcy.

Presently, the final objective of every trade action is to maximising profit. This implies that the net energy flow of the put and take actions must always be in one single direction, moving individually into the direction of take, take and so on. In our western

society making profit means the **true net momentum** being the difference between inflow and outflow of energy. In case B more energy is flowing in than flowing out exhausting all reserves of the buyer.

This mechanism can be described with help of some simple energy equations, which is beyond the scope of this treatment here.

Today the result of every successfully finished (completed) trade action is holding back an amount of energy. This is illustrated in Fig.3, where the arrows indicate the respective put action and take action. For the vendor a limited amount of energy is flowing out, but in time more energy is flowing in, because *the profit-loss system dictates that a maximised amount of energy is holding back.* It is common practice to say to call this net energy or profit**.** For the vendor, the profit-loss system directs the net momentum of energy flowing inwards. In the accepted economic system this holds for every company, or organisation.

A interesting equivalence is found in the concept of non-rotating back holes reducing the available amount of resources in their direct environment. This happens again and again independent of all other possible consequences and side effects. Energy may also connected to space, so reducing the available energy space is reduced. In other words, the inward directed momentum of the net energy contracts space. It is stated that this *stockpiling* of energy diminishes the available energy not destroying it, resulting in a contracting society. In banking systems, the most striking and rather disgusting behaviour can be found where the bonus culture is standard practice[18]. Based on what?

The following question is: What is the overall balance of this scale and to what limits this can go on? The banking and insurance companies show maximising profit in the extreme. This behaviour results in a disaster, stockpiling all energy shrinking into even lesser institutions and organisations, finally ending up with no available energy left.

The hypothesis is that the final outcome of the mechanism of what is called the principle of profit and loss is zero.

This outcome is proven now day by day and year after year in every aspect of our society. Many financial actions have passed every legitimate constraint due to a lack of feedback and control. We observe a diminishing and contracting economic society, which boosting unemployment rates and closings[19].

World -wide 20 % of the population control and consume 80% of all available resources. The result is that we will end up with a desperate place, polluted, raped, pillaged of all its resources, a planet ravaged through and through. To illustrate this wide spread mechanism in different circumstances, some other examples are given, in which the same principle of profit / loss is implied, where at the same time the ‘human factors greed, pride, and reach for power are always present.

[18] Bonus time, Gregory Vincent, Van Brug, 2008
[19] In the Netherlands a record of 10.000 in 2009

OTHER EXAMPLES OF THE FAILIING PROFIT AND LOSS SYSTEM

Example 1. It can be said that this is not altogether true, because there are many people who give and who contribute. There are such and such scientists who really want to make a unselfish contribution to humanity. But we also observe that a number of scientists have to take a lot of recognition to give credence to their existence and in practice they take all the recognition they can.

This is another form of taking and putting, or gaining and stockpiling. The actors care about becoming nominated for the Nobel prize. To illustrate this 'scientific' behaviour we only have to mention the cold fusion affair, the aids racing 'winners affairs' and the laser-invention. How many Nobel prizes can you be nominated for and how many can you ever win, that is what many scientists care about.

Example 2. What about good deeds or the giving (spending) of money to pay off nagging feelings of guilt? Guilt and fear are always working like great blackmailers! For instance, doesn't it look rather good to the fellow members of the organisation to drop a $50 bill in the offering plate waving around, so that everybody can see it? Just trying to get a lot of recognition and simultaneously trying to get tax reduction? There are even people who want to be nominated for sainthood when they die. It is just another form of applying the profit/loss principle, taking more back than putting in.

Example 3. The same holds for diplomatic relationships and peace talks. It's all a question of winning, convincing and lurking) the other guy to join the other side, compromising here and compromising there. It's a weird game resembling profit and loss. If we get them to give into us more, than we have made profit and if they go along with us without having to change a thing, then we have hit the jackpot. It is not difficult to mention many other examples in which the profit/loss principle can be recognised. The really disturbing thing is that the receiving end does not learn to trade or to exchange labour for goods, commodities or food in a sustainable way.

Example 4. Consider the banking systems and other world-wide operating financial systems based on a total lack of morality, aiming for profit only where the client is the object to suck him out. The modes operandi between banks and companies, the greed and the drive for bonuses and excessive compensation, by executive players involved is the main cause of the problems we are in now. Equivalent company failures and/or scandals are like those of Parmalat, Enron and Tyco. No equivalence is present and the balance in trade is distorted in a unprecedented way.

Example 5. The output of court procedures is often devastating for the whole society, not to speak of the treatment of the victims by trustees leading to suicides.[20] The annual amount of money connected to court procedures surpasses billions of Euros

[20] Annually In the Netherlands about 400 people commit suicide as the outcome of their personal bankruptcy and of a lack of justice done to them.

and can be considered as a loss.

CAUSE AND EFFECT OF THE PROFIT AND LOSS PRINCIPLE

Is it possible to explain this behaviour by some underlying fundamental mechanism? Firstly, it is observed as a human being we are acting totally individualistic assuming we are *separate* from the whole world. It is further assumed we are an unimportant singular individualised being, and behave as such that we are quite small.

To get bigger and to enhance our self-esteem and in order to grow, we must add something to what we are already. We need to become greater and more powerful. Thus, we assume making an *even* exchange in every trade action we are not gaining and to get anywhere. So what is observed: we seek profit, we seek what is called success, which means gaining and adding to ourselves, so that we become bigger, stronger and more powerful.

This attitude appears to be the basic *emotional* basis for life and for all people. We can find it everywhere in our society without exemption. *As a result everything is measured by profit and loss.* In terms of energy, we are focussed solely to the net momentum of taking and putting actions in one single *inward* direction getting a one way ticket.

We are not trading anymore, we are *pretending* that we are trading. It is also observed that we change the rules every day, month and year and have no idea where we are going to end! Obviously, it is very difficult to admit, that it has becoming an absolute chaos. The entire motivation is, to take and take and then to justify our taking by printing those little numbers on a piece of paper.

We observe and have to admit that, in a global perspective our social and economic corporation can be considered as unsuccessful. We have depleted our planet; we have depleted the entities that live here and the whole of the atmosphere that surrounds us. Put on the scale of profit and loss it is quite evident a loss, an unsuccessful failing enterprise.

In some places we have to start cleaning up the environment, *paying back* everything to nature what was grasped in greed. But up to now we still maintain the same basic principle of profit and loss as the correct system. It is also stated that making large investments does not automatically imply abandoning this principle!

Finally, a following question may be: where are we going to get from here and when does our future arrive? However, a much better question is, what will happen when we reverse the net momentum of this energy flow connected to any trade action? In other words, what will happen when we change the sign making the energy of the put action, the outflow energy larger than the inflow of energy or take action and implement more feedback to get it realised?

A WAY OUT REVERSING THE MECHANISM

Normally there is no way out. History has learned it is wrong to expect fundamental changes. But assume that we are able to reverse the mechanism of profit and loss or to get the inflow and outflow of energy balanced, firstly by changing the goals. What will happen, and can it be realised? As seen previously, emotional feelings are always strongly connected to the basis of our behaviour. This implies that, if we want to change things, we have to start with changing attitudes, awareness and mentalities. Is this possible? Put in another way, how many more disasters have to come before we will think of other possibilities and make an attempt to start considering it? And can we force this new attitude on people[21]?

To achieve this reversal attitude the following steps might be taken:

1. The very first step is to get out of the mentality that we are a singular, separate person who does singular, separate actions, and who trades on singular separate energies, thinking not affecting each other. In other words, we have to accept that we are one whole planet, all connected to each other. This is the first change in awareness to striving for.

2. Secondly, it must be accepted that there are, *enough* energy resources for everybody and that all resources are one inseparable whole. It is just a matter of sharing.

3. Further we have to accept living our daily life as though every action we take, is designed to contribute to life and to society as a whole.

It is not difficult to see that reversing the mechanism may lead to an *expanding* society instead of a *contracting* society. Clearly, this is totally against our feelings and accepted perceptions! It means that we have to give back into society more energy than to take!

If this thought is contemplated, what is the direct emotion coming up? Obviously, we think, if we start expanding outward and giving back energy from our personal resources and abilities, we will become totally depleted. We will lose energy and are becoming less than we are today.

This sounds as one big contradiction, but putting forth more energy out, more energy comes in automatically, not contracting space, but expanding space! This is by nature law. Expressed in terms of *human energy* this holds, because in life vacuum cannot exist. So, when energy is flowing out, more energy comes in!

This mechanism sounds unbelievable and is totally unfamiliar to us, but there are many examples of people who have given everything they possessed. They manifested a great expanding social and economical impact. The reversed principle is met in *non-profit* (educational) developmental organisations, where a maximum of energy is put out not asking for taking back of it. But there a number of other existing examples are available to illustrate this.

[21] The shock doctrine, the rise of disaster Capitalism, Naomi Klein, 2007, publ. Alfred A. Knopf Canada.

The principle is also met in a starting company who delivers a great amount of energy much more than the 'take energy', to get business started. In this perspective, it may not be recognised, but it accomplishes with the reversed principle of profit/loss.

The only thing what is lacking now is creativity to try out this mechanism on a larger scale and to obtain a new perception towards resources, which are still available. Actually, everybody is convinced, that we urgently have to find alternative ways to change matters, doing business. We need a change of rules. Hence, we have to alter the rules, if we want to survive on this planet. At this moment there is no other fundamental alternative economic theory available, which has the potential to solve our increasing problems of today.

DISCUSSION

The accepted economic principle of the profit and loss system, leads to a spiralling down society and planet, contracting and completely exhausting our society in resources and living space.

Rationalisation can never completely explain and describe our economic behaviour, but perception and basic feelings towards the economic win-lose system are always connected to it. An analysis of our economic profit-loss system in terms of flows of energy is made, which reveals the underlying principles.

In its limits the profit / loss system results in contracting society and zero energy rest resources.

An escape from this behaviour can be achieved when the net momentum of the resulting profit energy is reversed and input flow is *balanced* with the output flow. For expansion it is preferred that the energy of the 'put action' must be made larger than the energy of the 'take action'. Only this will lead to an expanding society.

Although, it requires a fundamental change in perception and awareness of our economic system, the alternative should be considered seriously to provide us an escape from a still growing disaster.

So far known there is no better alternative and no better fundamental economic mechanism, available. In other words discussion on a very fundamental level have to start again.