Brunnhuber, Stefan

**Working Paper**

# Financing the Future: An Argument for a Parallel Optional Currency

GLO Discussion Paper, No. 128

**Provided in Cooperation with:**
Global Labor Organization (GLO)

*Suggested Citation:* Brunnhuber, Stefan (2017) : Financing the Future: An Argument for a Parallel Optional Currency, GLO Discussion Paper, No. 128, Global Labor Organization (GLO), Maastricht

This Version is available at:
https://hdl.handle.net/10419/169413

# *Financing the Future*

## *An Argument for a Parallel Optional Currency**

*Stefan Brunnhuber

Affiliation: MD, PhD, CMO, Senator of the European Academy of Science,
Fellow of the World Academy of Science, Endowed Professor for Sustainability and Psychology, brunnhuber.cor@gmxpro.de ; www.stefan-brunnhuber.de

**Abstract:**

This talk aims to provide an argument for a parallel, optional, complementary currency system in order to overcome the constraints of the global economy and finance social and ecological projects on a global level. This argument goes beyond regulatory efforts and co-financed redistribution. The advantages of implementing this or a similar mechanism are manifold: firstly, it can be implemented in a fast and targeted manner and is relatively cheap. Secondly, it would have an anticyclical, anti-inflationary and resilient impact on our trading and payment system. Thirdly, it builds on findings in systems theory, thus avoiding the tedious discussion between the different schools of economics. Fourthly, it addresses the magnitude, volume and significance of the global challenges ahead. In short: this argument is based on a new kind of thinking on how to design a monetary ecosystem to make the world a better place.

**Key words:**

Sustainable Development Goals (SDGs), financing global commons, parallel optional currency

**Aknowledgement:**

The paper was part of the first Exel Conference in Umag in collaboration with the GLO

# O. Introduction

We are the first generation in human history with the potential to end poverty. We are also the last generation able to prevent an irreversible ecological disaster in terms of biodiversity, global warming, and resource depletion, a disaster that will go on for decades—possibly even centuries. We know all of this, so why is nothing happening? Some say it is because taking action is expensive, while others say it is due to a lack of innovative technology or simply because of bad governance. Many of the problems we face have to do with the design of our financial system. In 2015, world leaders met in New York to sign up to a road map for the future with 17 Sustainable Development Goals (SDGs) to improve the situation of humanity, the planet, wealth, peace and partnerships.[1] Most of these SDGs focus on common goods such as clean air, access to universal health, education (including pre-school education), and maintaining biodiversity.[2] These goods are not exclusive. They should be accessible to and enjoyed by everyone. There is enough scientific evidence, technological know-how and political consensus for each of these goals to be met. And all these goals are valid for the entire planet. However, they are expensive to achieve: in fact, financing them will require approximately 5 trillion USD every year over the next 20 years. How are we currently managing and funding such common goods?

[1] UN, Global Sustainable Development Report, 2015 edition

[2] Ostrom, Elinor Governing the Commons: The Evolution of Institutions for Collective Action [2]. Cambridge University Press, Cambridge 1990

# 1. The conventional way of doing it: redistributing money

The conventional way of financing such projects is by redistributing money. This process starts at the central bank, which essentially creates money out of nothing; next, commercial banks and the capital market loan this money to states, corporations and private households in the form of credit. The process ends with the production of goods and services. The entire sum, reflecting all goods and services measured as global Gross Domestic Product or GDP, is about 80 trillion USD per year.

However, the global value chain is affected by the shadow economy. The shadow economy comprises unregulated dark pool, high frequency trading und shadow banking, which reflects at least one third of world GDP; it also includes money laundering, trafficking, drugs, illegal financial transactions as well as economic activities in the informal sector. These parts of the world economy are highly deregulated; at the same time, they are interconnected with and relevant for the stability of the conventional economic sector in general, pulling the world economy in the wrong direction.[3]

On top of this, the global value chain contains the so-called entropic sector,[4] which basically reflects the costs of the disaster management, social and ecological externalities and spillovers that nobody really wants, but everybody

[3] On the shadow economy, see M. Hassan, F. Schneider (2016) Size and Development of the Shadow Economies of 157 Worldwide Countries: Updated and New Measures from 1999 to 2013. J Glob Econ 4: 218. doi: 10.4172/2375-4389.1000218; on shadow banking see IMF (2013) International Monetary Fund. Retrieved 2013-02-18; on the informal sector, System D (Debroulliard) see Neuwirth, Robert (2011). Stealth of Nations: The Global Rise of the Informal Economy. New York: Pantheon. ISBN 978-0-375-42489-2.

[4] A. Leo, Nefiodow, Der sechste Kondratieff. Wege zur Produktivität und Vollbeschäftigung im Zeitalter der Information. Sankt Augustin, 2006; or https://www.ioew.de/uploads/tx_ukioewdb/IOEW_SR_005_Entropy_Law_and_Economic_Process_in_Retrospect.pdf; or see: https://www.kondratieff.net/the-sixth-kondratieff;

is affected by and has to pay for. These include, for example, additional healthcare costs due to air pollution, the social costs of exclusion, unemployment, and poverty, as well as additional expenditure for security measures on both a private and public level.

The overall rationale for financing all this is a so-called end-of-pipe strategy: whether tax revenues or fees, austerity programs, privatization, additional public or private debt or additional overall economic growth, all of these strategies serve to create additional liquidity first in order to finance social and ecological projects on a local and global level second. Have these redistribution mechanisms worked in the past?

Historically, the world community signed up to spend 0.7% of world GDP—roughly 500 billion USD a year—on the SDGs. Other than the Scandinavian countries, the vast majority of nations have never attained this 0.7%. But even if the whole world managed to raise 0.7%, 0.7% is not enough to realistically finance our future. We need to get our figures right: approximately 8-10 times more funding is required to meet these challenges. This amounts to an annual 5 trillion USD of our annual 80 trillion USD of GDP. Withdrawing this amount from the economy—even in a gradual manner—would lead to a global recession. So where do we get the money we need to finance the SDGs? It is illusory to assume that a redistribution process will generate enough money and quickly enough to finance the Sustainable Development Goals. Could it be that we have the wrong solution? What is actually required is additional liquidity at a high scale, at full speed, and soundly targeted towards SDGs in a smart way that differs from what has been done in the past. The current operating system, however, is unstable, unpredictable and expensive.

## 2. The system is unstable, unpredictable and expensive

Empirical data and historical analysis have shown that the 2008 crisis was not the only one to occur in recent times: it was simply the first one to affect primarily OECD countries. If we take into account the number of debt crises (186), state banking (96) and currency crises (180) that have occurred since 1975 and consider the consecutive output losses, direct and indirect costs, the additional debt burden and fiscal costs, the pre-post gap for the pension system and the default for ecological projects these crises have led to, we can see that the current monetary monopoly is neither efficient nor robust enough to provide a safe and sound framework for investing in our future. Not only has this monopoly led to over ten critical events a year over several decades; it has cost 15-25% of GDP over two to three post-crisis years, a sum borne mainly by the taxpayer or future generations. When searching for a solution, there is one fundamental point we need to remember: money is not a natural law—it is a convention. Much like a club rule or a marriage contract or a legal contract, it can be modified and adapted to evolving global needs. So can we do things differently?

## 3. A complementary, optional, parallel currency system

What if we generated the funds we need globally in a completely different way? Central banks could create an additional 5 trillion USD using an electronic format such as block chain technology. What if these dedicated funds were earmarked exclusively for financing SDG-related projects? What if these funds flowed through different channels than the ones we are used to? We would then have a supplementary currency running in parallel to the existing conventional system that could generate the 5 trillion USD we will

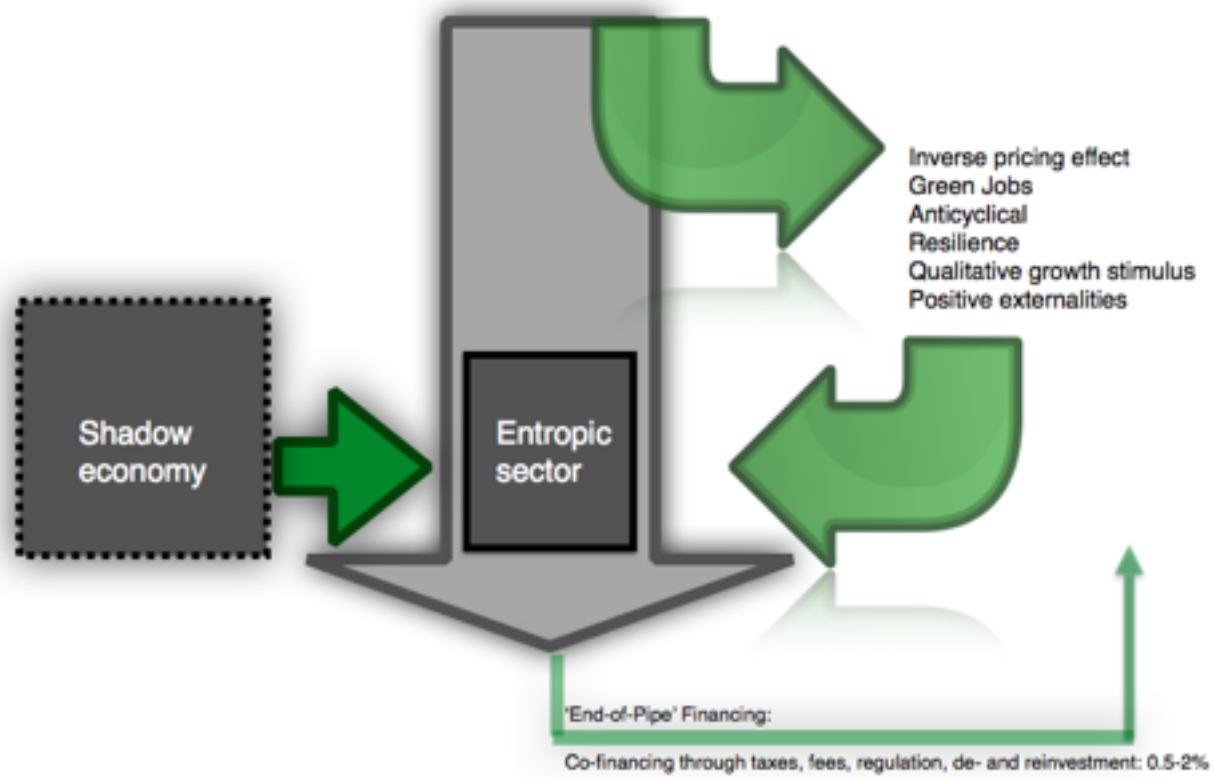
need so desperately over the next 20 years.[5] What does science say to all this? It there any empirical evidence that this could work?

Research has shown over a dozen positive effects.[6] For example, we could use new technology such as block chain protocols to create additional and targeted financial liquidity for millions of African citizens through their mobile phone network. In India, we could use the existing microcredit banking system for Indian citizens. Any dollar spent and invested through these green, parallel channels would immediately reduce—perhaps even eliminate—poverty globally within less than a year. The electronic format would prevent corruption and fraud as each transaction is transparent and public. Once the currency becomes legal tender for the payment of taxes, communal offices will have additional liquidity to rebuild public infrastructure and the millions of NGOs worldwide will receive proper funding and be able to do their jobs. Such a mechanism would enhance education and access to universal healthcare that would otherwise never occur; it would reduce resource depletion and clean up the air, avoiding the negative impacts on our common health. We would eventually tap into the untapped potential of the millions of unemployed humans, unleashing the creativity of billions of people. What would the effects on the conventional economy be? These 5 trillion USD would not hurt or harm the conventional economy. Precisely the opposite is true. Corporate and state planning, production and price levels would become more robust and reliable with a longer-term vision. A complementary currency would stabilize our cyclical economy of booms and busts. It is this pre-distributive rather than the

[5]Brunnhuber, Stefan (2015): How to Finance our Sustainable Development Goals (SDGs): Socioecological Quantitative Easing (QE) as a Parallel Currency to Make the World a Better Place, Cadmus, Vol 2, Issue 5, 112-118

[6]B. Lietaer, C. Arnsperger, S. Goerner & S. Brunnhuber 2012/2013: Money and Sustainability: The Missing Link. A Report from the Club of Rome – EU Chapter, Axminster: Triarchy Press

redistributive mechanism (end-of-pipe financing) that has the potential to shift our entire society in the right direction. The following graph illustrates this:




**Graph: A green, parallel, optional currency system:**
Firstly, a parallel optional currency system would create new green jobs and allow people from the shadow economy to shift over into the green domain (inverse trafficking). Secondly, it would reduce negative externalities and downsize costs within the entropic sector/damage costs (inverse pricing). Thirdly, it would reduce the pro-cyclical tendencies of the monetary monoculture in money creation, the inter-banking sector, credit lines and real investments (anticyclical); furthermore, it would stimulate qualitative growth pathways, incorporating new renewable technologies and generating positive externalities by using different channels. It should be noted that this mechanism does not disregard or reject conventional regulatory efforts or redistributive schema, but simply broadens the perspective.

## 4. A parallel currency system is Pareto superior

Why does such a parallel optional currency system have the potential to increase wealth, resilience and efficiency at the same time,[7] making the overall economic operating system Pareto superior?[8] The real tragedy of the commons we are dealing here[9] is not that they are not exclusive, but that they are operating within a monetary system that prevents them from unleashing their full potential for the good of humankind. Empirical research shows consistently that the Return on Investment (ROI) on (global) common goods for society as a whole is stunning 10-100 times higher[10] than the yields achieved through a private business model or state bonds. The following graph illustrates the yields for private and state bonds over a century:

| | S&P 500 | 3-M T-Bill | 10-Y T-Bill |
|---|---|---|---|
| 1928-2015 | 11 % | 3 % | 5 % |
| 1966-2015 | 11 % | 5 % | 7 % |
| 2006-2015 | 9 % | 1 % | 5 % |

**Graph 2: Standard and Poor's 500 Index; 3-month Treasury Bill; 10-year Treasury Bill[11]**

[7] Brunnhuber, S., 2017: The real Tragedy of the Commons—How to Finance our Future, 2017 DRI Wien; https://www.development-institute.org/deutsch/dri-forschung/studien/

[8] Pareto superior describes a state in which one or more agents are better off without hurting or harming the rest. Given that 75% of the world population does not benefit from the existing system, the world is vastly deflationary. Unleashing the potential of the global commons will therefore be beneficial for all.

[9] Garrett Hardin: The Tragedy of the Commons. In: Science. 162/1968. S. 1243-1248

[10] For general information see: http://www.copenhagenconsensus.com/post-2015-consensus

[11] http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html
Federal Reserve database

This parallel optional currency mechanism, including block chain technology and an ethereum protocol, would provide targeted, programmable, identifiable, recordable financial transactions and earmarked and dedicated funds, avoiding fraud and corruption. The ID block chain would ensure that the additional liquidity is spent only on SDGs from the outset. This would create a new parallel marketplace for the 75% of the world population who have not been benefiting from the existing operating model. The new mechanism would eventually become intertwined with the traditional sector. From central banks to governments, to local state authorities, to IGOs, to NGOs, this mechanism enables the creation of a Complementary, Optional, Parallel Easing (COPE) to empower humankind and overcome the shortfall in financing our future. The following equation demonstrates this as a formula:

$$WE = \frac{L \; x \; ROI \; x \; M}{y} (df)$$

Key:

**WE:** Wealth effect generated by a parallel currency
**L:** Additional liquidity created by the central bank
**ROI:** Return on Investment per project realized
**M:** Keynes's demand multiplier
**y:** Annual adjustment
**df:** % default of failed projects

It should be noted that the wealth effects created by the mechanism above are potentially several times larger than the traditional Keynesian multiplier due to the different technology (block chain), different channels,[12] reduced negative

[12] The most widely discussed alternative channels are the citizen dividend, the public channel, the channel for small and medium-sized enterprises (SMEs), and the NGO and IGO channels to directly fund these bodies and private-public partnerships, including so-called advanced market commitments (AMCs).

externalities, reduced spillovers in the entropic sector and the reduced negative impact of the shadow economy. Accordingly, this mechanism would provide a more stable and resilient framework for the global economy as a whole.[13] I think it is no overstatement to say that a complementary optional currency system would be Pareto superior to a monetary monopoly.

## 5. Changing mindsets

Instead of thinking in a linear, serial, sequential manner—which we do when we generate end-of-pipe strategies to distribute money in order to finance our future—we need to start thinking in parallel. Like a bike needs two wheels, we need a currency system with two branches: a conventional and a complementary one, both designed for different purposes but both intertwined.[14] If there is one single variable with the greatest potential to change the world, it is a parallel monetary system. A parallel monetary system would be a game changer. All of this could be started in less than six months if the six largest central banks were to create such a green, parallel, optional, complementary currency. Addressing the design of the financial system will not solve all our problems, but all our problems will be easier to address by such a mechanism. And designing a parallel currency system would make our world more efficient and resilient at the same time, and would definitely make the world a better place to be.

---

[13] The power of extremely unlikely but harmful events is described well in N.N. Taleb's The Black Swan: The Impact of the Highly Improbable (2007) and Random or Antifragile: Things That Gain From Disorder (2012, both Random House): anti-fragility is more than resilience, as a system that is exposed to shocks not only resists, but improves through the exposure to volatility, randomness and stressors. This means that a system improves in performance through antifragile features. In this understanding, a parallel currency system is an antifragile feature. In finance, this in known as the Barbell strategy: "A dual strategy, a combination of two extremes, one safe and one speculative, deemed more robust than a 'monomodal' strategy; often a necessary condition for antifragility" (p. 428).

[14] Brunnhuber, Stefan 2016, Die Kunst der Transformation, Herder, Freiburg