

A systemic framework for mitigating risks associated with debt and financial crises, climate change, inequality, unemployment and asset inflation.

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# ONE-CIRCUIT SOVEREIGN MONEY

**State-issued. Market-based. People-oriented.**

**"Observe and do what works." —**

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## TERMINOLOGY

If we (Positive Money & IMMR movements) want to get our message across and distinguish our proposal in public, we must think very carefully about, unify and update **our terminology**. We do get media coverage but it seems that very, very few people really know what “sovereign” money is and almost NO ONE IS WILLING TO READ OUR FULL PROPOSAL. And what’s more, there are many other financial system reform proposals covered in the media, such as Modern Monetary Theory (MMT) or classic Fisher’s 100% reserve banking. In my experience from live debates, if we fail to make a **CLEAR, ONE-WORD distinction of what sovereign money is**, at the end of the day a vast majority of people who see “sovereign money” coverage in the media will very likely leave with the (wrong) impression that it’s “basically” full reserve banking — the same as Fisher’s proposal.

So I asked myself, **in ONE word**, what is the main distinction of sovereign money from other similar money reforms? The answer I came up with was: **one-circuit** — only one kind of money (Central bank issued money) in one-circuit system. Most people are under (false) impression that the state issues money. Since “sovereign” is synonymous with “state”, it sounds to them as “State money — we already know that!” and they stop paying attention. On the other hand, ONE-CIRCUIT steers every money discussion in the right direction, in a sense that (i) we can explain that currently we have 2 separate circuits (this is certainly news to almost everyone I spoke to about money system), and (ii) we can then explain what we propose.

ALWAYS using **ONE-CIRCUIT** word IN MEDIA will immediately bring readers/viewers to questions like: What do you mean one-circuit? We have more circuits now? Two kinds of money? Economists who know Fisher’s proposal will also be interested in how is this different because until now they thought “Nothing new here, Fisher already proposed this long time ago!”. We need to break this stereotype in thinking, esp. in economists... This can only be done with short, clear, self-explanatory, carefully selected, consistent and many, many times repeated SAME TERMINOLOGY used in media (the same few, carefully selected words repeated over and over again).

In my experience, bringing up and **explaining one-circuit** vs. split-circuit money system makes a very clear distinction for the audience about what makes this sovereign money system design uniquely different from other proposals.

# INTRODUCTION

Make no mistake — I am a firm, active supporter of sovereign money reform and all the great benefits it would provide for our people, government and planet. But if we as a movement (Positive Money, IMMR) want to make a quantum leap to gather critical mass of supporters to make sovereign money reform a reality, we must have clear vision. CLEAR VISION means being aware that every proposal has its pros and cons. Clear vision means seeing strengths and weaknesses, not just in the status quo (commercial bank money system) or in other reform proposals, BUT ALSO in our own proposal. If we want to actually implement a money system reform that will affect millions of people, we must act responsibly. Therefore, right now, please take a moment and ask yourself this simple question:

## **What are the REAL RISKS involved with OUR sovereign money proposal?**

Chances are, as a member of our movement, you don't know any *real* ones... At least that's what happened to me... I quickly realised that our discussions, books and papers are aimed mostly at defending sovereign money reform but I never read a comprehensive analysis of what WE think are the *real* risks associated with OUR proposal...

The trouble is that if we don't see any weaknesses in our own proposal, we are running a high risk of becoming more of “believers in our cause” rather than being unbiased partners for objective money reform discussion based on reason and logic.

This is why I decided to examine our sovereign money proposal “through the lenses of our critics and opponents” and identify some potential risks that may be involved with implementing our traditional sovereign money proposal. This paper addresses these perceived risks and offers solutions on how to mitigate them.

In the above mentioned context, this paper proposes a “free-market upgrade” to sovereign money concept as described by Prof. Joseph Huber in his book “Sovereign money” (2016). To be able to properly understand “sovereign money” and our market-based upgrade, I highly recommend the above mentioned Prof. Huber's book, plus read the paper “Sovereign Money — An Introduction” published in December 2016 by a non-profit organisation POSITIVE MONEY, U.K. A copy can be downloaded free from [www.positivemoney.org](http://www.positivemoney.org)

Reader's basic understanding of how commercial banks create money (commercial ‘bank deposits’) every time they issue a loan in today's banking system is also assumed.

Even though I am the only author of this paper, in accordance with general recommendations for writing papers, in the text below I mostly use plural pronoun ‘we’ instead of singular ‘I’, eg. “we

propose”. That being said, the ideas and mechanisms presented in this paper are my own. As of the date of this writing, they do not represent official positions of neither IMMR, nor Positive Money. However, to be able to improve this paper, I hope to receive a constructive, critical feedback from the members of both movements. In fact, such feedback would be greatly appreciated from members of any money reform movements, academics, central bankers, or any other entities interested in monetary reform.

When debating different money creation methods/systems the key word is always MODERATION. Generally speaking, a money system works well if money creation is done with moderation and in step with the needs and development of a real, sustainable economy.

This always raises questions such as WHO, WHEN and HOW should decide HOW MUCH new money to create, and WHERE TO INITIALLY SPEND IT?

In general, when designing a **new money system**, the reformers must — among other variables — think about and decide the following:

- centrally planned vs. market-based
- without seigniorage vs. with seigniorage
- one Central bank base rate vs. several base rates

One of the major problems with current bank money system is that there is no effective cap on money creation. This has many ramifications, such as excessive money (“bank deposits”) creation, high house prices, high debt levels, cyclical financial crises, bank bailouts, inequality, environmental consequences, to name but a few.

Table A  
OBSERVATION OF MECHANISMS THAT LIMIT MONEY CREATION

	Current fractional reserve banking system	2016 sovereign money system proposal
<b>Hypothetical</b> limit on how much money can be created in the system	unlimited amount	unlimited amount

<p><b>Practical</b> limit on how much money can be created in the system</p>	<p>There are several practical limits, although they do not work ideally, one might even say they don't work at all because financial crises happen cyclically. Banks have the power to create money and they use it every time they issue a loan — in this case, however, they don't create money “independently” because to create new money (i) also SOMEONE ELSE has to be willing to take a loan, (ii) banks must also follow external regulations (for example required bank equity, Loan to Value ratio set by regulatory body, etc.), (iii) when banks create money they create a liability for themselves payable on demand, while on the other side they create a long-term asset</p>	<p>It seems that the only <b>practical</b> limit is the sound judgement of the MPC members, i.e. how they interpret macro economic data / indicators. In other words, the 2016 sovereign money proposal recommends the same few people who have the power to create money also have total “independence” in their judgement and no other legal or practical limit on how much money they actually create. How much money to create is therefore a central, bureaucratic decision without <i>direct</i> link to current demand for money in the market (economy). This paper seeks to address this major concern of public money creation.</p>
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The **2016 sovereign money system** reform plan rightly proposes that banks treat money as an asset rather than a liability. It also describes the new infrastructure necessary for this change/ transition from bank money to sovereign money system. So far — in principle — we have an agreement. However, **at the heart of the system, it proposes a Monetary Policy Committee (MPC) at Central bank with exclusive power to “create any amount of money at any time”** as genuine seigniorage (without government simultaneously incurring debt) and giving it, immediately and in full amount, to government for spending. Besides built-in corruption danger of giving such tremendous power to a few select people at MPC, the 2016 proposal also assumes that basically a **centrally-planned money creation** (stripped of *direct* connection to the market) is the best solution to create and support a stable, sustainably-growing **market economy**. Well, it seems obvious that there is an inherent conflict present in this assumption.

The aim of this paper is to address honestly the perceived risks of the 2016 sovereign money system proposal. We invite everyone to read it and submit a constructive, specific feedback. This will allow us to mitigate the risks of our proposal to the best of our abilities. Honestly addressing these risks is the only way to build a strong case for our proposal, which will then have better chances to finally bring onboard critical mass of supporters (from right, centre and left wing political parties) to implement the sovereign money system reform. And we all know we do need

more support to make this reform actually happen! This is why I feel we have a responsibility to ask ourselves these not so easy, but valid questions:

- 1) Under the 2016 sovereign money proposal, what is the *systemic* mechanism that would prevent corruption of **MPC board members, who would be legally allowed “to create any amount of money at anytime”**? Don't forget, MONEY = POWER.
- 2) In general, the government nominates Central bank board members — given this quite direct relationship — what is the *systemic* mechanism that would prevent the government from influencing, or putting direct pressure on MPC board members to create ever more free money for *direct* government spending? (genuine seigniorage is great incentive for the government = money creation for immediate government spending without government incurring corresponding debt by issuing govt. bonds). You must imagine this in **real life context**. IMAGINE you are the Prime Minister (Govt.) and you have a “friend” (MPC) who can give you free money. Perfectly legally. Without you incurring any debt. No strings attached. Unlimited amount. Your “friend” (MPC) just has to be smart about it and cover his back — every time he gives you money, he has to write and publish a technical report (written most likely in a difficult, ECB-like language, which almost no one will actually understand). Apart from technical macro-indicators, predictions and estimated numbers, the report will include a narrative of how this newly created money will benefit our people and businesses when you (Govt) spend it on goods and services in our economy. In this systemic set-up: what's to stop you (Govt) from non-stop calling your friend (MPC), influencing him in whichever way you can think of (positive or negative), to give you more and more free money? After all, you basically nominated your friend (MPC) to his position and you also have really good intentions — to help our people, our businesses, our planet, right? (and maybe also to get re-elected!)
- 3) What would be the *systemic* response under the 2016 sovereign money proposal, in case some external circumstances (for example fear of recession) would cause people and investors to *abruptly* hold on to their savings excessively, thus *suddenly* depriving banks of regular access to sovereign money funds in the open market which they normally use to finance credit? If this happened, banks would not have enough money to finance credit. What would be the systemic solution? The bank(s) in trouble would contact MPC and request MPC meeting as soon as possible to decide on how much money to create and spend into economy through government spending? ... and wait for this money to somehow become available in the open market to finance credit at some later time? Or would MPC look at each individual bank and decide whether to issue emergency loan? To which bank? In what amount? Under what conditions? How many days/weeks would this process take? It seems certain that this set-up might seriously affect credit availability in the economy during some **sudden, unexpected changes/situations** in the money market. And we know that real life brings such abrupt changes...

- 4) If Central bank issued seigniorage from money creation by way of “helicopter money” and call it citizens’ dividend, what would be the *systemic* check that would stop politicians from pressuring MPC to issue more and more “free money” for the people during their term, and especially before election? This way, politicians can say to the people: “Elect us again and we’ll make sure you’ll get more citizens’ dividend!”. Remember, **from politicians’ point of view**, money always comes with strings attached except for when MPC creates it directly — in which case money is magically, completely free! The politicians would not want to miss out on it!

In trying to answer these questions, we came up with a **market-based, sovereign money** system solution. Instead of MPC deciding directly the amount of money to be created, we propose money creation be linked *directly* to the needs of market (economy). In this paper we’ll endeavour to explain how this approach would create a better framework for smooth and *moderate* money creation, prevent direct high-level corruption possibility, improve credit availability during unexpected circumstances and bolster stability of the financial system.

### Option 1

Market-based, sovereign money system WITHOUT SEIGNIORAGE

State-issued, one-circuit, market-based, sovereign money issued by Central bank as debt. All accounts (clients, government, banks) are kept at Central bank. Imagine replacing “thin air” with “Central bank” as the only and unlimited source of all money creation. It would work similarly as fractional reserve banking, but the base interest rate would become more direct and far more effective tool to cap money creation. Here’s how it would work: When a client comes to a bank for a loan and meets bank’s conditions, commercial bank would *not* be allowed to create money out of thin air (on its balance sheet). Instead, it would ask for a loan from Central bank. Central bank would create this money immediately, on demand, and loan it to commercial bank automatically at base interest rate. (In other words, Central bank would create a “bank deposit” in commercial bank’s account kept at Central bank). Commercial bank would then on-lend this sum to its client at interest = base rate + bank margin. When repaid, this money would be deleted just as bank money is deleted today in FRBS. That means that the Central bank base interest rate would apply *directly* to ALL money creation (not just reserves in separate circuit as is the case in today’s two-circuit system) — **in this “Option 1” ALL money in the economy would be actually on loan from Central bank**. Base interest rate would thus become a more effective tool to cap excessive money creation because it would *directly* influence the demand for money and in turn, the stock of money. Central bank could even decide to set several base rates, that means a different rate for different types of loans. For example, about 2% base-rate on loans to businesses or green investments; 4% base-rate on mortgages, higher percentage on speculations in financial markets loans, etc.

This means that under normal circumstances, Central bank would NOT decide the *actual amount* of sovereign money to be created. It would decide only the base interest rate(s).

PROS: Credit always available in real economy, money creation *directly* connected to the needs of market (economy), more effective base interest rate(s) to cap excessive money creation, Central bank would charge interest on money in circulation which would become government revenue.

CONS: However, in this system, there would still be an ever-rising, perpetual indebtedness of society as a whole and also other high-debt related issues would remain unsolved. Therefore, we favour the second option...

## Option 2

### (recommended)

#### Market-based, sovereign money system WITH SEIGNIORAGE

In this system, as mentioned before, sovereign money would be an asset for banks, households, firms and government (as if tokens, in the form of physical cash or digital numbers) circulating in the economy (in line with the basic idea of the 2016 sovereign money proposal). Banks would normally finance their loans with equity OR mostly with funds borrowed from household savings or other investors in the open market. If the funds in the open market would be insufficient or too expensive, the banks could anytime ask Central bank for a loan — from this point on, the system would work as described in Option 1, i.e. Central bank would automatically create the money (initially as debt, i.e. CB would create a “bank deposit” in commercial bank’s account kept at CB), and lend it to a bank at particular base rate. Commercial bank would immediately on-lend this amount to its client, etc. BUT — upon repayment — the newly created money would NOT be deleted. Instead, the repaid portion of the principal would be credited to Central bank account, and from there to Government account as genuine seigniorage for government spending/ investment. Banks would naturally look for cheapest means to fund their loans. So, for example, if investors in the open market are willing to invest in time deposits at 3% to finance mortgages, banks would naturally borrow in the open market instead from Central bank at 4% (this would mean no loan from Central bank = no new money creation). On the other hand, if the interest rate to finance mortgages would be, say, 5% in the open market, then banks would naturally borrow from Central bank at 4% instead (this would result in Central bank’s new money creation). Central bank would set base interest rate(s) with the aim to fulfil its mandate — reach target inflation.

We call this new, original framework an **indirect monetary financing of government with delayed seigniorage**. PROS: This mechanism will

- 1) put market forces to work for society, because there will be a genuine seigniorage revenue for government *created systemically, as a by-product of free-market economy* functioning,
- 2) lower the possibility of direct MPC (Central bank — central government) corruption,
- 3) create ecosystem for MODERATE, smooth and timely money creation in the right amount determined by market demand at specific base rate,

- 4) make sure that there will always be sufficient credit available, in the right amount, where it is needed and in real-time (without MPC delayed board meetings and decisions)— money creation will be directly linked to the needs of the market (economy), and
- 5) render Central bank's tool of base interest rate(s) setting much more effective in preventing excessive money creation due to the fact that (i) in this one-circuit system design all newly created money will originate exclusively at Central bank, (ii) particular base-rate will apply on all new money creation, (iii) new money would be created only if there is market demand (i.e. if someone in real economy is willing to take on debt and pay interest = base rate + bank margin) AND this demand can't be sensibly met with funds available in the open market.

CONS: Introducing seigniorage into money system by not deleting money repaid to Central bank may under some rare, unexpected circumstances (for example productive capacity of economy would for some unforeseen reasons decline suddenly and dramatically) cause a situation when there is temporarily more money in circulation than is needed to keep prices stable. If necessary, Central bank may use tight monetary policy to remove money from circulation (the market). See Chapter 3 for details.

This sums up the market-based, sovereign money system operation and delayed seigniorage creation *under normal circumstances*. We encourage further discussion/research into more Central bank money creation tools, including “helicopter money” or similar tools, especially particular guidelines and conditions under which they may be employed by Central bank.

## EXECUTIVE SUMMARY

This paper seeks to answer the following question: Is it possible to design a money system that would simultaneously

- 1) keep the flexibility and elasticity of present-day bank money system (FRBS) — money creation linked directly to the needs of the market (economy),
- 2) keep current consensus on Central bank independence,
- 3) be more stable — i.e. able to minimise cyclical financial crises better than the financial system currently in place,
- 4) give Central banks better, more direct and effective control of the stock of money,
- 5) provide framework for development of special tools to be used under extraordinary circumstances when interest rates (near zero) no longer suffice to boost demand,
- 6) make the payment system safer by separating it from the lending activity of banks,
- 7) provide “windfall profit” for the government through genuine seigniorage?

In addition, is it possible that this reformed money system

- 1) would always make sufficient credit available in the economy (on demand — at the right time, place, in the right amount, at the right price),
- 2) would *systemically* prevent excessive money creation, and
- 3) would alleviate perpetual, high, and ever-growing indebtedness of the society?

If so, what are the basic characteristics and internal mechanics of such system?

The proposal presented in this paper shows that such money system reform is indeed possible. It outlines logical premises and inner workings of such reformed money system so that the reader may clearly understand **WHY and HOW it works**.

**“Building a house” analogy** below illustrates what areas need to be addressed while designing a new, reformed money system.

#### **Foundations:**

Q: Centrally planned vs. market-based?

A: In this paper, our answer is: centrally-issued, market “planned” (market-based).

We created a **NEW definition of MONEY** to give the reader an important framework for easier understanding of our line of thinking, including the concept of **indirect monetary financing of government with delayed seigniorage** explained in this paper. It is our hope that this new way of looking at money will finally, once and for all, answer the eternally-contentious question **WHAT IS MONEY?** (or, more precisely, what money should be).

#### **DEFINITION OF MONEY**

Money is assets or “tokens” (currency units in the form of physical cash or digital numbers in accounts) issued and entered into circulation **with the purpose** of creating, maintaining and supporting a well-functioning, stable, prosperous and sustainable market economy. At the same time, acting in the public interest, the issuer of money (Monetary Authority) must continuously, systemically monitor the condition of economy and use legislatively mandated monetary policy to manage stock of money (liquidity in circulation) in order to ensure price stability.

#### **DEFINITION OF PURPOSE AND FUNCTION OF MONEY**

There is one aspect that differentiates MONEY from all other private, quasi-money alternatives. It’s **the reason for issuing money**. In other words, who issues money, and why? And what determines when and how much money is created?

ALL PRIVATE ENTITIES’ reason for issuing quasi-money (e.g. cryptocurrency) is PRIVATE PROFIT.  
STATE-OWNED CENTRAL BANK’S reason for issuing money is sustainable market economy.

This is critical to understand, so let me repeat: **The purpose of MONEY is to create, maintain and support a well-functioning, stable, prosperous, sustainable market economy. All other functions of money derive from this purpose (for example price stability, universal means of exchange, store of value, unit of account, credit, etc.). SO THE PURPOSE OF ITS CREATION/ISSUING DIFFERENTIATES MONEY FROM all money ALTERNATIVES.**

The economy is well-functioning, stable, prosperous and sustainable when it increases quality of life on Earth and well-being of our human society. Privately-issued money alternatives are never ultimately motivated by this purpose. Therefore, if we want to create a sustainable economy and a better world, money must be state-issued — i.e. issued exclusively by a state-owned Central bank. From this follows that money is de-facto backed by the state (government). All lawful money in circulation (legal tender) should come from this single source — state-owned Central bank.

Without economy and value (real assets & services) it produces, and without peoples' belief that they can actually exchange money for something valuable, money would be worthless pieces of paper or numbers in a computer system. Money is also a universal medium of exchange — we all need it to be able to produce, exchange and pay for goods and services in the economy.

On the other hand, the underlying purpose of creating (issuing or mining) all other money alternatives — such as private “bank deposits” in fractional reserve banking system, bitcoin or other cryptocurrencies, gold, silver, commodities or anything else used for payment or settlement of debt — is ultimately private PROFIT of the issuing entity. Their common denominator is that they ALL LACK this fundamental feedback loop to economy and public interest — they are NOT issued with the purpose of creating, maintaining and supporting a well-functioning, stable, prosperous, sustainable market economy AND their quantity in circulation is not continually, systemically managed by the issuing entity with the aim to achieve price stability. **This is how all money alternatives differ from MONEY.**

Central bank regulates stock of money money in circulation with the aim to fulfil its mandate from democratically elected government, approved by Parliament. To this end it uses its monetary policy tools defined in the mandate — primarily the setting of base interest rates, and other tools.

#### **Ground floor:**

Q: From monetary perspective, how do we achieve a well-functioning, sustainable economy?

A: In general: **stable prices** (target inflation), employment, **SUFFICIENT (the right) amount of credit**, in the right place, at the right time, at the right price (interest) to meet market demand (without over-heating economy).

#### **First floor:**

Q: What mechanism is used to **cap money creation** and credit availability if economy approaches overheating (price bubble starts forming)?

A1: In a split-circuit FRBS, Central bank sets base interest rate, but only on “reserves”, i.e. electronic money in accounts kept at Central bank in a payment circuit separate from real economy. Commercial banks assess clients’ collateral, ability to repay the loan, then decide how much credit they offer.

A2: In a one-circuit, **market-based, sovereign money** system: Central bank will have more effective tools to influence the stock of money (i) because it will be an authority with exclusive power to create ALL money in real economy (physical cash & digital numbers in accounts) (ii) because it will set *base interest rate(s)* on ALL newly created money which will enter and circulate in one-circuit payment system, and (iii) because it will pre-determine other possible loan conditions under which new money may be created. In addition, commercial banks would still assess clients’ collateral, income sufficiency to repay the loan, and then decide how much credit they offer.

A3: In a one-circuit, 2016 sovereign money system: MPC would have a tough job of **estimating** hard numbers and dates, as to WHEN TO create new money and HOW MUCH EXACTLY / when to stop creating money, and then, when to again start creating more new money, and in what particular amount.

### **Second floor:**

Q: Does the state receive **seigniorage** benefit from money creation?

A1: In a split-circuit, FRBS: NO (or in some countries, very little for coins).

A2: In a one-circuit, market-based, sovereign money system WITHOUT SEIGNIORAGE: NO.

A3: In a one-circuit, market-based, sovereign money system WITH SEIGNIORAGE: YES (indirectly, delayed, in partial instalments).

A4: In a one-circuit, 2016 sovereign money system: YES (directly, immediately, in full amount).

### **Attic:**

#### **“Helicopter money” financed through immediate money creation.**

If there is political will for it, the Parliament will put “helicopter money” in Central bank’s tool box, ALONG WITH SPECIFIC GUIDELINES under which it may be used (for example, in economic recession as defined by certain macro-economic indicators).

From the Central bank’s monetary policy point of view, we see “helicopter money” as an exceptional, loose monetary policy tool to support weak demand during economic recession, when low interest rates no longer suffice to stimulate economic activity and sustainable growth. Accordingly, the means of “helicopter money” distribution should reflect this goal. There are many methods for how to achieve this, for example vouchers (paper or electronic such as bar codes or

QR codes etc.) that must be used within a certain time period. Such vouchers would ensure that the money is actually spent into real economy to boost demand instead of being used in different ways (eg. kept to increase savings, or pay off debt). “Helicopter money” (i) is much more effective in directly stimulating aggregate demand than QE, and (ii) doesn’t increase inequality like QE. Therefore, “helicopter money” might soon replace QE in CB’s tool box. However, it must also be openly stated here that “helicopter money” along with current QE are perceived as exceptional (and controversial) tools because they both break (our own) basic monetary separation of powers defined in the 2016 sovereign money proposal. This is because one “player” – Central bank – unilaterally decides (i) when to create new money, (ii) how much new money will be created, and (iii) how it will be used. Therefore, we recommend the Parliament include clear guidelines in CB mandate regarding when and how CB may use “helicopter money” (eg. inflation must be below certain level for some period of time; max. amount of money that CB may create and use for “helicopter money” may be defined at, say, 5% of GDP per year, etc.)

### **Citizens’ dividend vs. “Helicopter money”. What is the difference?**

We would also like to make clear that there is a difference between “helicopter money” and citizens’ dividend. “*Helicopter money*” is loose monetary policy tool that Central bank may use during recession to boost demand by creating new money and paying it out to citizens in equal payments in such form as to ensure the money be spent in real economy within certain period of time. CB doesn’t need government’s approval to use this tool since central government must not interfere with CB’s monetary policy decisions. However, CB must use “helicopter money” in strict legal compliance with its mandate, which stipulates specific conditions which must be met before Central bank may decide to use “helicopter money”.

*Citizens’ dividend* is a share in “profit” or surplus in central government budget, which the government may decide to pay out as equal payments to citizens. From this follows that citizens’ dividend has nothing to do with CB monetary policy or deciding how much new money to create. The word DIVIDEND means A SHARE in SURPLUS or PROFIT. Therefore, logically, there must be a budget surplus to be able to pay out citizens’ dividend. If there is a central government budget deficit at the end of fiscal year, then to create new money, pay it out as equal payments to citizens as suggested by some versions of sovereign money proposals and call this practice “Citizens’ dividend” would be misleading. It would also be irresponsible to make this method a “normal money creation tool” because the country running fiscal deficit would actually be getting deeper into debt while, at the same time, paying out “free money” to people, with no strings attached. If developed societies aim for a responsible management of public resources, such approach to “normal new money creation” does not seem to be a sensible solution to reach this goal.

### **Basic income**

We know this may not be the best analogy, *but in a certain way*, creating a new sovereign money system might be similar to creating one’s own business – in both cases you need to put in place a functional system of people, processes and activities with certain purpose and logic behind

them. And in both cases, the goal is to create a system that actually works in *real-life conditions* and delivers value (to society, government, the people who are involved in it - owners, employees, customers). Only after it is proved that the system works in balanced way and creates value (product) in real-life conditions, then we can ponder and decide what to actually do with possible surplus (profit or value) created by this system.

This is a fact: We, the members of our Positive Money and IMMR movement, indeed do have good intentions — we want to reform our money system because we want to help our families and children, our people, our society and our planet. That's why we spend our own free time and make financial donations to keep the momentum going. However, to succeed, we must first make sure that our money system reform will achieve its Number 1 Task: keep low inflation AND support a well-working, sustainably-growing **market** economy. Therefore, our initial work should focus mostly on how will the sovereign money system **really work in practice**, what are its pros (AND honestly, CONS), what mechanisms will prevent inflation, corruption etc. Simply put, we must create a money system which will work better than the commercial bank money system, not just in theory, but *in real-life conditions*. Then, when the system is implemented and generates profit (seigniorage, and other income such as interest payments to Central bank etc.), the time will come for distribution of fruits of our labour as fairly as possible among citizens.

Truth be told, basic income is a political issue and money system reform is an economic issue — that's why these two discussions should NOT be mixed together at this point when we're just designing the sovereign money system. Central banks have clearly defined monetary responsibilities and should focus strictly on those. If the new, reformed money system creates seigniorage, it should become government budget revenue. Democratically elected government answers directly to people via elections — from this follows that it's the government's responsibility to allocate public resources. Adopting basic income is a complex decision. Monetary financing would anyway be insufficient to cover the full cost of basic income. And what's more, the amount of seigniorage created will vary from year to year depending on how the economy is doing during that particular year. If the government decides to implement basic income, however, it should responsibly secure its financing regardless of current condition of economy. That's why basic income must be government's, NOT Central bank's (money system reformers') business.

## 1. HOW IT WORKS

### 1.1 Brief description of the 2016 sovereign money proposal

In a sovereign money system, all money is issued by state-owned Central bank. Money is considered (and accounted for on balance sheet as) an asset by commercial banks, households

and businesses— you can imagine it as a physical tokens (cash) or digital numbers in bank accounts kept at Central bank (Central bank digital currency, CBDC). For accounting on Central bank balance sheet — please see Chapter 2.

Digital money circulates in a one-circuit payment system which means that — when implemented — citizens, companies, banks, government, everybody's bank accounts would be physically kept in Central bank's accounting system (e.g. TARGET2 extended). Of course, Central bank is not in a position to provide services to public. Commercial banks will keep providing loans, Online Banking Interface, ATMs, cards, payment and other financial services just as clients know them today. New players — FinTech companies — will also be allowed to compete with banks to foster innovation, e.g. Online banking interface, payment services, etc.) There will be only one kind of money — legal tender to settle all public or private debts — i.e. sovereign money issued exclusively by the Central bank in these forms, (i) **digital** (Central bank digital cash — CBDC, i.e. bank deposits in Central bank accounts PLUS possibly Central bank issued cryptocurrency) and (ii) **physical** (cash). Further research into the possibility of Central bank issued, fully-anonymous cryptocurrency is needed; this topic is outside the scope of this paper. Bank deposits at commercial banks, along with de-facto government insurance of banks' private business (too big to fail) will cease to exist. All *current* accounts will be safely kept at Central bank (this is equivalent to de-facto "100% government insurance" of peoples' bank deposits at Central bank, because people would lose money in their *current* accounts only if the Central bank itself went bankrupt — which is highly unlikely). If a major commercial bank failed, our money in *current* accounts at CB (interest free, no risk) would remain untouched — all we'd have to do is find a new Online banking service provider. However, the part of our money that we decided to invest (lend to banks as time deposits, i.e. transfer from our current account to banks' *investment* account) would bear *interest and a risk of loss*.

The above paragraph is a very brief summary of POSITIVE MONEY's 2016 paper and Prof. Huber's sovereign money system infrastructure as described in his above mentioned book. So far so good.

## 1.2 What's wrong with it...

However, our views differ when it comes to the role of **Monetary Policy Committee (MPC)** at Central bank, how to assure its independence, how new money is created and injected into economy, and how and when seigniorage is used to finance government spending (or, alternatively, "helicopter money").

The original 2016 POSITIVE MONEY paper proposes that MPC at Central bank will decide directly *the amount of money* to be created and credit this full amount immediately to government account — direct monetary financing of government with seigniorage (without debt creation, i.e.

without issuing Treasury bonds). The newly created money would be immediately available for government spending, in full amount. To ensure “independence and separation of powers”, the MPC would decide only *the amount* of new money to be created while the Treasury (Finance Ministry) would decide *how this new money should be injected into economy* (“helicopter money” which they (inaccurately) call “citizens’ dividend”, Increased government spending, Reduced taxes, or Indirectly financing lending to businesses).

**This approach indeed may or may not work.** What will determine its success? **Human factor.** And that’s the problem. Yes, it is true that every money system invented thus far needs a certain level of human involvement for its operation. But the 2016 sovereign money system proposal is *based mainly, directly* on human factor. If MPC board members are very honest persons, have best of intentions, almost never make mistakes and estimate the amount of money they create “rightly” most of the time, then the system might work. On the other hand, if

- a) even with best intentions, they keep making wrong decisions (estimates) about the amount of money they create, simply because it is very hard to answer *precisely* such general question as “When to create and How much is the exact, right amount of new money we should create for the economy?”, or
- b) they are simply corrupt (or become too “inter-linked” with special interests or the government which in the first place nominated them directly or indirectly) and overshoot money creation periodically during their term, then what happens? Inflation? If so, how do we fix it? Replace MPC members, hoping the new ones will do a better job this time around? OR, as it usually happened in the past when there was a similar problem, will we switch back to commercial bank money system and blame the switch on “bank lobbyists”?

## 1.3 Our market-based upgrade — major differences

These valid concerns are a reason why we came up with a sovereign money “market-based upgrade”. Here are our proposed major changes to the role of MPC at the heart of a sovereign money system:

- (i) Central bank money creation will not finance government directly. Instead, all newly created money will initially finance a part of bank lending (credit), under specific conditions, as described below:
- (ii) MPC will create “loan categories” for creating money which will be lent to banks to finance credit in each particular category (e.g. mortgages, business loans, green investment loans, etc.), see Table 2. The idea behind splitting the economy into different categories with a separate base rate for each category is easier to understand with the use of simple (loose) analogy: Commercial banks want to maximise their profits/minimise risk, therefore they charge different interest rates for mortgages than, let’s say, loans to businesses. Central bank’s motivation is different: it wants to keep stable prices in different sectors of economy, and also reach target inflation in the economy as a whole. This approach will allow Central bank to put

a different “price tag” (base interest rate) on money created and pumped into different sectors of economy. This mechanism will greatly enhance Central bank’s ability to maintain price stability in the economy as a whole, and even in sectors with competing needs (for example, Central bank would be able to increase Mortgage base rate to prevent a house price bubble BUT AT THE SAME TIME it may choose to keep lower base rate on loans to businesses).

- (iii) Rather than deciding *the amount* of money to be created, MPC would **decide only base interest rates**, one rate for each loan category (or sector of economy), and possibly other conditions for bank loans to be financed with Central bank money creation. MPC will *not limit the amount of money* that can be theoretically created, thus ensuring the same flexibility and elasticity as in current FRBS. Basically, just like in FRBS Central bank sets *one* base interest rate, in the new market-based, sovereign money system the MPC will set *several* base interest rates — one for each “Loan category” or sector of economy. This paper outlines just the basic idea / framework of the new system’s inner workings — further discussion about details is needed, e.g. how many “Loan categories” to actually create, what should the rates be, etc.
- (iv) New money would be created *ONLY IF* banks don’t have their own money (equity) and cannot get funding in the open market to finance credit OR the interest rate in the market is higher than base rate. Base rates would be set at a level determined by Central bank as optimal for a particular sector of economy, with the aim to reach target inflation and support a stable, sustainably-growing economy.
- (v) If banks can’t find adequate funds in the market, they would always have *immediate access* to a loan from the Central bank at pre-approved base rate of interest (and other conditions). SUFFICIENT CREDIT would thus always be available in real economy.
- (vi) New money creation would be AUTOMATIC — new money would be created by creating an accounting record in Central bank’s accounting system when a bank requests a loan AND meets the Central bank’s other pre-approved conditions (similar to how currently ‘bank deposits’ are created in FRBS when a client first has to meet bank’s conditions and then receives a loan — a commercial ‘bank deposit’ is created in client’s bank account). For accounting treatment, please see Chapter 2: Central Bank Balance Sheet Accounting.
- (vii) Instead of a (delayed) committee decision, new Central bank money creation would be driven by real-time market demand at current base rates.
- (viii) This system will allow for an *indirect* government monetary financing. **INDIRECT monetary financing of government in this context means financing with *delayed* seigniorage (‘windfall profit’ upon first cycle of repayment)**, explained in this paper.
- (ix) Should the market start overheating and prices start rising too fast, for example house price bubble starts forming, MPC would simply raise base interest rate in this category (Mortgages). This would result in (i) limiting money creation by lowering demand for mortgages, (ii) stabilisation of market prices in this sector, AND AT THE SAME TIME (iii) it will be possible to keep lower base interest rates in other sectors (e.g. loans to businesses).
- (x) This whole mechanism will go a long way in helping to minimise a possibility of a financial crash (remember, in one-circuit, market-based, sovereign money system banks are not

allowed to freely create 'bank deposits' on their balance sheet anymore). But, IF for whatever other reasons an economic crisis approaches anyway — weak demand in an environment with near 0% interest rates — Central bank will have special tools in its toolbox to boost demand, such as (i) “helicopter money”, (ii) interest-free loans — principle must be paid back in full, or (iii) interest-free loans that are partly or wholly non-refundable (loans that don't need to be paid back in full). Further research into these and other special tools is encouraged, mainly to define specific conditions under which these may be employed by Central bank.

- (xi) In a one-circuit, market-based, sovereign money system, if need be, Central bank may also use tight monetary policy to remove money from circulation (the market). See Chapter 3.
- (xii) To direct investment towards transitioning to green economy, basic CB “loan categories” (eg. business loan) will be expanded by mandatory government classification for investment banking (eg. 1. business loan — 1.1. electric car R&D, manufacturing). This way, individual investors will have important information they need to decide where they want their money to be invested, or alternatively, which types of investment they choose to avoid (eg. fossil fuels).

It might be argued that fears regarding power abuse, corruption, or collusion of Central bankers with the governing Cabinet or President should not be dismissed, BUT: that the same problem will remain with any institutional arrangement. If people in important functions are willing to ignore rules and regulations, not much can be done. Institutionally, you can provide checks and balances (separation of monetary, fiscal and creditary responsibilities is an example) and threaten wrongdoers with criminal prosecution, but, as you know ...

To answer this, we need to point out a critical difference between the two proposals:

1.) Under the 2016 sovereign money proposal, if "bad guys" are voted in, the President (or Prime Minister) could collude with MPC **about how much actual money to create...** is it 5 mil. or 50 mil. or 500 million? and spend immediately... no strings attached. This is (rightly) seen as a serious problem by many.

2.) Under the market-based, sovereign money proposal, if "bad guys" are voted in ... yes ... the President (or Prime Minister) could still collude with MPC, but basically **about base interest rates...** This makes a whole lot of difference in terms of mitigating possible risks associated with the process of public money creation & power abuse.

## 1.4 State-issued

When pundits discuss any money system design, i.e. how money should be created, how it should enter into circulation, and how it could possibly be removed from the economy (should there be too much of it in circulation), there are basically two opposing ideas, backing more or less every money system reform or proposal:

- 1) **The state** is the best, sole authority on issuing money AND deciding how / when / where this newly created money should be spent,

- 2) **The market** is the best guide when it comes to answering the question of when / how much NEW money to create and where to spend it.

Every author of a money system reform must ask himself/herself this question: Do we want a centrally planned economy OR a market-based economy. And similarly, do we want a centrally planned money system OR a market-based money system? Money is a critical part of a well-functioning economy and therefore these two questions are closely interrelated. This is why all money reform proposals seem to be a variation of one of the above mentioned archetypal viewpoints.

So... which one to choose?

Well, the answer may not be so straightforward and black-and-white as it may seem to staunch supporters of either concept at first glance. Whether we like it or not, as mentioned before, every approach has its pros and cons. Other aspects of political economy (for example citizens' freedom) are not a focus of this paper. Therefore, we'll look at some general, historical facts about these polar opposites *only in terms of money and economy*.

CENTRALLY PLANNED MONEY SYSTEM (and ECONOMY):

**Pros:** more free goods and services provided by government, better social security (retirement, no homelessness), stable (the same) prices everywhere, money was less scarce and more evenly distributed among citizens, "full-employment" — everyone had to be employed, or would be put to jail, people had less hectic work life and more free, family time.

**Cons:** centrally-planned money system and economy is less productive, innovative and competitive than a capitalist, free-market system. Often, store-shelves were half empty. Poor variety in products, often low-quality services. The state created and distributed money centrally — people did have money but often couldn't buy much with it. Too much "free stuff" can last only temporarily (even if decades) — but eventually, from economic perspective, this imbalance brought the system down.

FREE-MARKET MONEY SYSTEM (and ECONOMY):

**Pros:** more competitive economy, great supply and variety of goods and services, better quality and flexibility of services. In spite of serious consequences, great challenges and financial crises in recent years — somehow it still lasts today.

**Cons:** less free stuff from government, great and ever-increasing income and wealth inequality, high indebtedness, prices may range widely, high house prices, hectic work life, no free time for family which results in many other problems in society (substance abuse), less social security, more homelessness, unemployment, money is more scarce. Free-markets need to be regulated to some extent because they fail to self-correct and often result in financial crises, sometimes even in economic depression. This is the reason why governments pass different regulations — bank

regulation, anti-monopoly regulations and laws trying to preserve “free-market and fair competition” in the marketplace.

Our market-based, sovereign money system proposal offers — to the best of our knowledge — thus far unexplored way of marrying state authority (public interest) with free market forces (private interest) in the economy. It’s an original approach to designing a monetary system in a free-market economy — a state-issued but market-based, sovereign money circulating in one-circuit payment system.

**What makes this paper unique is that it COMBINES state monopoly on money creation with real-time, market-based decision making on NEW SOVEREIGN MONEY CREATION, thus linking money creation process directly to real-time money demand in economy. If Option 2 in the INTRODUCTION section — sovereign money system WITH seigniorage — is implemented, the state budget will receive additional “windfall profit” from money creation (seigniorage) while current consensus on Central bank independence can be preserved.** In this money system proposal, a state-owned Central bank has an exclusive power to issue all money BUT AT THE SAME TIME *the market* decides when and how much NEW money to create and where to *initially* spend it (where in real economy it is needed). This architecture greatly reduces MPC corruption possibility and increases system’s stability.

All fiat money (without intrinsic value) — including “bank deposits” that we currently use — can be accepted and trusted by the public only with de-facto backing of the government. Similarly, privately issued cryptocurrencies do not exist in and of themselves — their value can be determined only in relation to the official, state legal tender, which again is “backed” by the government. When privately issued money is de-facto backed by the government, it means profits are private and losses are nationalised — obviously not a good solution for the people (taxpayers)! This is actually how FRBS works — yes, it’s the system we currently have in place! Therefore, rather than have government backing privately issued money, it makes more sense to empower state-owned Central bank to be the exclusive issuer of the currency used in our country/currency area.

**Q:** Why should central banks be state-owned (fully-owned by government)?

**A:** Money and a stable financial system is of utmost importance to our *national security*, functioning of the economy and survival / improvement of our modern society as we know it today. We see no room for private ownership of Central bank for the same reason why we can’t imagine private ownership of the Parliament (imagine Parliament delegating its power to pass laws to a few, privately-owned law firms which would be passing national laws for us!?), or partly-private ownership (and decision-making) of the Supreme court — from the society’s public

interest point of view, both ideas sound like total non-sense, do they not?! Similar to passing state laws, issuing its own currency is the state's sovereign prerogative. When asked who creates the money, most people answer "the Government" or the "Central bank" — people today are under *false* impression that the state creates money, not private banks as is the reality today.

History has proved that separation of powers in government is there for a good reason and it works when crisis (conflict between individuals or government branches) comes. In this context, it seems sensible to think of Central bank as 4th branch of government — monetary branch — independent (similarly as today) from other government branches. To enable a Central bank to fulfil its mandate, it should be given effective monetary policy tools to carry out its duties while preserving its independence from the the rest of the government.

Broadly speaking, the Central bank has the following tasks:

- a) to fulfil a well-defined legal mandate from democratically elected Parliament, such as maintain target inflation (maybe also employment),
- b) to oversee stability of financial system (in some countries they have a separate regulatory body for this purpose).

**Q:** Why does state-issued, fiat money have value/validity?

**A:** State-issued, fiat money has value because

- 1) it is *legislated* as the only legal tender in the country (currency area) and *must be accepted, by law*, to settle all debt, private and public,
- 2) secure technology used for issuing money (both, physical cash & digital numbers in accounts) and payment clearing system prevents counterfeit money from being created and from entering circulation,
- 3) an independent Central bank guarantees that the money keeps its value by adopting and enforcing regulations that effectively prohibit excessive money creation,
- 4) it is Central bank's duty to fulfil its mandate, integral part of which is to carry out appropriate monetary policy to reach target inflation / full employment / financial system stability.

**Q:** Why is state-issued, sovereign money the best alternative for society so far invented?

**A:** The above mentioned characteristics give state-issued currency a unique, insurmountable advantage over other private, quasi-money alternatives. This is mainly because sovereign money value is tied to the limited amount created (available in circulation) AND increasing this amount (creating new money) is influenced and guided by the development in the market, i.e. monetary

policy decisions are based on the condition of economy, actual GDP growth and price stability (CPI) — this doesn't mean though that for every 1 EURO of GDP growth a new 1 EURO of money will be created by Central bank.

As far as we know, ALL THE PRIVATE QUASI-MONEY ALTERNATIVES LACK IN THEIR DESIGN THIS FUNDAMENTAL PRINCIPLE that **it is the price stability, GDP growth rate, and employment IN THE REAL ECONOMY that significantly influence how much new money may be created** and pumped into the system. This is how state-issued MONEY is tied to the real world and well-being of society. Yes, it is true that privately issued quasi-money alternatives (cryptocurrencies) also have limits on how much may be created BUT (i) these limits are set arbitrarily by some predefined algorithms totally unrelated to what is happening in the real economy, (ii) they ignore market demand, and (iii) the motive for creating new, private cryptocurrencies is private profit, instead well-being of society.

## 1.5 Market based

### Example:

Paul wants to take a 100,000 EUR mortgage to buy an apartment but his bank cannot find available money in the open, sovereign money market that it could borrow to reasonably finance Paul's mortgage. However, in a market-based, sovereign money system, any commercial bank can anytime borrow any amount at base interest rate and under pre-approved conditions from the Central bank to finance credit. So Paul's bank borrows 100,000 EUR from Central bank and on-lends this amount to Paul. Therefore, this 100,000 EUR newly created sovereign money would finance specifically Paul's mortgage (new money creation is *directly* linked to real-time existing market demand, specific purpose and amount). Paul would end up paying interest that equals base rate + bank margin. As Paul repays principal to his bank, and his bank repays to Central bank, this repaid amount would not disappear. Instead, it will be credited to Central bank's account. Only now this seigniorage can be transferred from Central bank's account to Government's account and thus made available for government financing. This mechanism is the reason why we coined the term **indirect monetary financing of government with delayed seigniorage**). For accounting treatment, please see Chapter 2, Central Bank Balance Sheet Accounting.

**In a market-based, sovereign money system WITH DELAYED SEIGNIORAGE, a Central bank creates new money automatically depending on market demand at specific base rate. Central bank will set 'money creation' base interest rate(s) with the aim to reach its main goal — target inflation. The banks will have incentive to first look in the money market for cheaper sources to finance their lending (credit) before borrowing from Central bank (CB). If no funds are available in the open market (or the interest in the open market is higher than**

the base rate) – the newly created money initially enters into circulation as debt – as CB loans to banks (and maybe to other financial institutions). As these loans are repaid back to Central bank, the repaid amount is not deleted. Instead, it is transferred from commercial bank’s account to Central bank account, and from CB account to the Government account – only now it becomes available to finance government (that’s why we call this *delayed seigniorage*). In this one-circuit system, if need be, Central bank may also use tight monetary policy to remove money from circulation (the market). See Chapter 3 for more.

Table 1

Comparison of fractional reserve system vs. market-based, sovereign money system

Current commercial bank money ('bank deposits') system	<b>UPDATED sovereign money system with new money creation driven by free-market in real time</b>
<b>Unlimited</b> source of new money = “thin air”	<b>Unlimited</b> source of new money = Central bank
Incentive for new money creation: PRIVATE PROFIT	Incentive for new money creation: fulfilling government mandate – TARGET INFLATION (maybe employment)
Directly at the money creation source (“thin air”) – there are no effective restrictions on the amount of money that can be created by banks	Directly at the money creation source – Central bank will create “loan categories” and set different base rates for automatic lending to banks that face shortage of sovereign money funds available in the open market to finance credit (different kinds of loans). Base rates will work as <i>indirect</i> restrictions on the amount of newly created money BUT they will work effectively, <i>directly at the source</i> of ALL money creation.
There are only <i>indirect</i> restrictions to money creation: eg. equity requirements & other bank regulations and legislation, base interest rate on reserves which are in separate payment circuit from the economy	Some of the <i>indirect</i> bank regulation will stay in place eg. equity requirements, while some other regulation may be discarded

<p>Commercial bank lending creates new money, loan repayment destroys the money</p>	<p>When banks encounter shortage of sovereign money in the open market to finance lending, they can ask for an immediate loan from Central bank. This CB lending will automatically create new money, on demand, under specific pre-defined conditions. Under loose monetary policy, as banks repay their loans back to Central bank, <b>the repaid amount of money will NOT disappear</b> but instead, it now becomes available to finance government.</p>
<p>Central bank never creates money that Treasury directly decides how to spend.</p>	<p>If there is political will and Parliament puts this tool into CB's toolbox, under exceptional circumstances defined in its mandate, MPC will have an option to decide an exact amount of money to be created (eg. QE for People to boost demand during economic recession). Such direct "helicopter money" creation definitely may NOT happen during normal times — as there is a high risk of abusing this power.</p>
<p>Bank money system and private banks are de-facto insured by the government.</p>	<p>Similar to physical cash today — Central bank digital currency will implicitly be fiat money backed by the government. De-facto government insurance of commercial banks private business (too big to fail) will cease to exist.</p>

Frankly, if we ask how was it possible for the West to build its wealth, the answer is exactly this element of the present-day bank money system (FRBS): **to always accommodate demand for money at certain interest rate.** However, the problem with current Fractional Reserve Banking System (FRBS) is

- that there is no effective cap on money creation (despite thousands of pages of bank regulation),
- FRBS is private money without seigniorage for government budget ('bank deposits' are a privately issued substitute for money that we use for everyday electronic payments),

- money = debt, we (as a society) will always need money therefore under current FRBS we will always be in debt to private banks. The system works well for some years (wealth is being built) and then it crashes (cyclically, length of the cycle shortening), which wipes off big portion of the wealth it had created and hits the bottom half of the people the most!

**The purpose of this paper is *not* presenting just *our opinion* about what the best theoretical approach to money reform is. Rather, it is to use accurate observation of certain functional aspects which have actually worked in real-life conditions in the past and in different money systems (eg. (i) lower debt levels & seigniorage benefit in state-issued money systems; (ii) in FRBS new money creation decision making linked *directly* to demand in the economy) and combining these into a new, well-designed, sovereign money system with balanced roles of the state and free-market forces. This will help to systemically tackle major societal issues caused by private bank-money system today.**

**The market-based, sovereign money mechanism works as follows:**

State-owned Central bank would be the only source of all money creation (one-circuit money system, one kind of money, all accounts kept in Central bank accounting system). MPC would create loan categories and define base interest rate for each category (see Table 2). MPC would also PRE-DEFINE other basic conditions for “money-creating loans” in each category (for example, for mortgages, commercial bank rules may allow to issue a mortgage for the amount of 100% of collateral value, but Central bank could cap the amount at only 80% for loans financed with money creation).

- 1) IF sovereign money system can't provide existing money in the open market to finance bank credit (banks cannot borrow in the open market because there is not enough savings, people are unwilling to invest or market interest rate is higher than Central bank's base rate) then banks could immediately borrow from Central bank. It would work as follows in steps 2) and 3):
- 2) If predefined conditions are met by a commercial bank / client and there is demand at current base rate, Central bank would automatically create new sovereign money (CB would actually create a “bank deposit” in commercial bank's account — CBDC — at this point seigniorage is de-facto created but not yet available for government financing),
- 3) and lend this newly created money automatically, in real-time, to commercial bank at sector specific base rate of interest (for example mortgage base rate) to finance credit.

Steps 2) and 3) would be done AUTOMATICALLY, because the base rate (and possibly other conditions) would be pre-defined by MPC in advance. It would be automatic sovereign money creation, just like in fractional reserve system new money is created automatically out of thin air when predefined conditions are met by the client (income, collateral value, etc.). In practice,

sovereign money creation would mean simply creating accounting record in Central bank's accounting system (no waiting for MPC or Treasury decision).

**Indirect monetary financing of government with delayed seigniorage:** OVER THE YEARS, as the mortgage financed with newly created money is being repaid to Central bank (1st cycle repayment), the repaid portion of the loan principle would be credited back to Central bank's account. ONLY AT THIS LATER POINT, the repaid part of newly created money may be transferred to the government account and be used to finance government expenditure. NOW the government can decide how to spend it.

In market-based, sovereign money system, Central bank **base** interest rate means that, if there is demand in this particular "loan category" / economy sector at current base rate, NEW money (seigniorage) is *automatically* created by Central bank and lent to a commercial bank in real-time to finance credit which could not otherwise be sensibly financed with existing sovereign money funds available in the open market (insufficient savings, investors unwilling to invest, high market interest).

**Central bank will set the base rates with the aim to fulfil its mandate — reach target inflation.**

If banks can't raise enough money in the market to finance new loans to clients, they would always have *immediate access* to a Central bank loan under specific, pre-defined conditions and at a particular base interest rate depending on the sector of the economy or type of the loan.

Central bank will be "responsible" for and monitor also **house price inflation** in a similar way as it is now "responsible" for general inflation (CPI). Further discussion is needed on the exact value of this indicator (should it be also just under 2% or less, or more?). To achieve, for example 2%, house price inflation, Central bank will take house prices development into consideration when setting different categories of base interest rates (esp. Mortgage base interest rate).

## Table 2

**Example** of how Central bank may set **DIFFERENT BASE RATES to finance credit** in different economy sectors, or "loan categories". (% figures are arbitrary — and probably too low — they serve just for illustration!) \*Remember, in market-based, sovereign money system, **base rates are "new money creation" rates**. Under normal circumstances, interest rates in the open money market would be lower than these base rates.

<b>Economy sector / Type or Purpose / Loan category</b>	<b>Central Bank Base Rate (money creation rate)</b>	<b>Note / Rationale</b>
Mortgages	4 %	Banks will first look for cheaper sources from household savings/investors; <i>house prices development</i> will be taken into consideration
Loans to businesses	about 2%	Creating new businesses is deemed non-inflationary
Green Projects Loans	about 1%	Investing into green solutions is investing into real economy and is presumed not inflationary
Consumer spending Loans	rate varies depending on the current inflation (CPI), demand in the economy, other factors	Household spending seems to have the most direct influence on boosting demand and CPI
Speculations on financial market	high percentage!	
Loans to banks to buy Government bonds	...	
Other types of loans ...	...	

Besides “loan categories”, another criterion that comes to mind and may be considered is **economic development in different REGIONS** (eg. GDP per capita in different counties). The government could create a certain point-rating system of different parts of the country. If it wants to support for example building homes in a less developed countryside, it could use monetary financing for this purpose — Central bank could offer discounts on base interest rate. The logic of the point system would be as follows: the lower GDP in an area (county) the bigger discount on the interest rate. For example, a country-wide “Mortgage base interest rate” could be at 4%; but if one wants to build a home in an underdeveloped, rural area then according to the point system, there would be a certain discount on his mortgage, say  $4 - 0,5\% = 3,5\%$ . If someone else wants to build a home in an even poorer area (with an even lower GDP per capita), there would be even bigger discount, say  $4 - 1\% = 3\%$  rate. The same logic would apply to business loans, etc.

## Is the market-based, sovereign money system just credit guidance?

No.

As we've already stated, we are proposing sovereign money system — in principle — as originally described in Prof. Huber's book, but **WITH different MPC role**. MPC's role would be to pre-decide base interest rate for each "lending category" AND pre-decide also other conditions for Central bank loans to banks. The amount of CB loans available would always be unlimited (on the contrary credit guidance is pre-approved *amount* of credit). If, for example, housing market would start overheating at current "mortgage base interest rate", MPC can anytime raise the "Mortgage base rate" until the market stabilises. **MPC's adjusting base interest rates and thereby demand for money in each category and thereby overall stock of money would be the normal functioning of the sovereign money system.**

Under EXCEPTIONAL circumstances (near 0% interest rates), if need be to stimulate aggregate demand, sovereign money system offers (i) great, secure infrastructure (once-circuit system, bank accounts kept at Central bank etc.), plus (ii) special tools, which are much more effective than the QE at Central banks' disposal today. In economic recession, "helicopter money" along with clear rules regarding when and how it may be used (approved by Parliament and stipulated in CB mandate), would also be in Central bank's toolbox.

Let me emphasise that sovereign money market would — in principle — function exactly as described in the original 2016 proposal. **However, MPC would not be able to create any amount of money at any time it wishes.** Instead, MPC would be able to anytime change the base interest rates in any loan category (see Table 2).

Direct monetary financing of government will remain prohibited ("direct" in this sense means sovereign money creation for **immediate** government financing, **in full amount**). Instead, newly created money will be used for **indirect monetary financing of government through delayed seigniorage**, see Paul's mortgage example at the beginning of this chapter.

**Indirect monetary financing of government through delayed seigniorage** mechanism will minimise possible conflict of interest between the government and Central bank (MPC board members) by breaking the DIRECT relationship between new money creation and its immediate use, in full amount, for monetary financing of government. **In effect, delayed seigniorage will be state's 'windfall profit', i.e. a by-product profit from sovereign money creation based on market demand for money at given interest rates set by CB with the purpose of creating a stable and sustainable market economy.**

There would be, hypothetically, unlimited amount of money available to meet the demand just like in current fractional reserve system (and for that matter as is also the case in the originally

proposed 2016 sovereign money system where MPC can also technically “create any amount of money”) BUT in market-based, sovereign money system the MPC could EFFECTIVELY say NO to more money being created by raising base interest rates OR setting other conditions / restrictions on lending to commercial banks. See Chapter 3 for more on *monetary policy*.

## 1.6 People-oriented

One-circuit, market-based, sovereign money system is focused on (i) maximising well-being of the whole society by use of monetary policy which systemically prevents excessive asset inflation, one of the main causes of rising inequality, and (ii) creating conditions for switching to green, sustainable economy. By making it possible for majority of the people to become free from perpetual, systemic indebtedness and creating genuine seigniorage revenue for government without tax hikes, this reform will make the financial system work for the people, instead of forcing the people to work for the system by endlessly paying interest on every EURO in existence. The system architecture is designed to make sure there is always enough money (credit) to meet the market demand in real economy. At the same time, it puts in place mechanisms to effectively prevent excessive money creation, price bubbles and economy overheating. Also, it increases stability of the payment system and reduces taxpayer costs by eliminating de-facto government insurance of banks’ private business (too big to fail). Last, but not least, it creates delayed seigniorage — a significant “windfall profit” for indirect monetary financing of government expenditure.

One-circuit, market-based, sovereign money system also addresses the following problems:

- environment
- high house prices
- inequality
- democracy
- financial crises
- unemployment
- taxes and public spending

Detailed explanation of these issues can also be found at [www.positivemoney.org](http://www.positivemoney.org)

## 1.7 Checks and balances

We designed the ***market-based, sovereign money system with delayed seigniorage*** in a way which would allow for a long-term, balanced, smooth and moderate public money creation in step with economy development.

At its core, there is a basic separation of powers between Central bank and central government. Central bank's main objective is to fulfil its (updated) mandate approved by Parliament, i. e. (i) to create national money supply, and (ii) to use monetary policy to achieve target inflation. Central bank transfers its profits (including *delayed* genuine seigniorage — profit from issuing currency) to central government account. In this way, an increased CB profit becomes a part of state budget revenue and thus benefits society as a whole. Democratically elected government has a mandate from the people to make decisions on public spending — therefore, it decides how to spend its budget revenues, including seigniorage profit. Central bank makes monetary policy decisions in compliance with its mandate. Central government must not interfere with these CB's decisions.

There are several key “players” who interact in this money system, namely: Central bank, central government, commercial banks, clients (households, firms).

A system of checks and balances incorporated in this proposal ensures that under normal circumstances, no single “player” can unilaterally create money and abuse money creation power.

### Table 3

**Checks and balances among key players  
in one-circuit, market-based, sovereign money system**

	<b>CAN DO</b>	<b>CANNOT DO</b>
<b>Central bank</b>	Create new money IF banks ask for loans to finance credit; Set base interest rates; Pre-approve other loan conditions and regulations; Use loose / tight monetary policy	under normal circumstances, cannot decide when to create money OR the amount of money to be created OR how newly created money will be spent
<b>Government (Parliament approved)</b>	Define Central bank mandate; Define rules for normal and emergency use of monetary policy tools (during recession)	Cannot interfere with Central bank decision making
<b>Commercial banks</b>	Decide conditions under which they give loans to clients; Approve / refuse to grant a loan to client; Intermediaries — can negotiate interest rates in the market; Ask Central bank for a loan which will result in money creation	Cannot create “bank deposits” on their balance sheet as a substitute for sovereign money
<b>Households and Firms</b>	Can decide to take loans; Can decide to keep, spend, invest their savings OR repay loans; Can vote for their representatives in Parliament (Government)	Cannot directly influence rules and regulations for loans. Cannot decide whether their loan request will be approved.

## 2. CENTRAL BANK BALANCE SHEET ACCOUNTING

### SOVEREIGN MONEY CREATION IN ONE-CIRCUIT, MARKET-BASED money system

This chapter describes how new money creation and indirect monetary financing of government **with *delayed seigniorage*** is accounted for on a Central bank (CB) balance sheet. The example below shows how CB money creation automatically finances PART OF commercial banks' credit (that part for which commercial banks can't get funds in the open money market, OR if the funds in the open market are only available at higher interest than CB's base rate). *Banks must comply with other CB regulations, eg. debt/equity ratio, before they can ask for a new loan from CB.*

#### Example:

Commercial bank has a client interested in taking a mortgage but it doesn't have its own money AND is unable to reasonably (at interest lower than base rate) secure the funds in the open market to finance the mortgage. Therefore, commercial bank immediately asks Central bank for a loan. This loan from CB will automatically, in real-time, create new money — a new “bank deposit” in commercial bank's account kept at Central bank, in other words it creates fresh Central bank digital currency (CBDC).

1. Central bank loans 100,000 EUR to commercial bank (new money creation driven by market demand at current base rate, expands the Central bank's balance sheet)
2. On-lending: Commercial bank lends the 100,000 EUR to its client
3. After one year, client repays (for easier illustration in lump sum) a part of his principle 5,000 EUR to commercial bank + 6% interest 6,000 EUR
4. Commercial bank repays Central bank 5,000 EUR principal + 4,000 EUR (4% Mortgage base interest rate) — money is NOT deleted — instead it is credited to CB account
5. **Delayed genuine seigniorage** 5,000 EUR
6. Central bank credits government account with the repaid part of loan, i.e. 5,000 EUR — now the government can democratically decide how to spend its 5,000 EUR (delayed) genuine seigniorage (profit from issuing currency)
7. Central bank printed cash and minted coins in cumulated amount of 40,000 EUR and put it in its vault
8. Commercial bank asked for 20,000 EUR cash and Central bank sent it in armoured vehicle (this shrinks Central bank balance sheet but M1 remains at the same level because CBDC was simply exchanged for physical cash); **\*Note:** if Central bank decides to start issuing anonymous cryptocurrency, accounting for it on Central bank balance sheet will be the same as accounting for physical cash. **This means that Central bank**

**CRYPTOCURRENCY** (asset on Central bank balance sheet) is different from Central bank digital currency (CBDC) which is a liability on Central bank balance sheet.

#### CENTRAL BANK BALANCE SHEET

<b>Assets</b>		<b>Liabilities</b>	
1. Loans to commercial banks			
=> New money creation	+100,000	1. Commercial bank's account	+100,000
		2. Commercial bank's account	-100,000
		2. Client's account	+100,000
		3. Client's account	- 11,000
		3. Commercial bank's account	+ 11,000
		4. Commercial bank's account	- 9,000
		4. Central bank's account	+ 9,000
5. Loans to commercial banks	- 5,000		
5. Seigniorage			
=> Zero-Coupon, Perpetual bond	+ 5,000		
		6. Central bank's account	- 5,000
		6. Government's account	+ 5,000
7. CASH (coins & notes in vault)	+ 40,000	7. EQUITY – CASH issued	+ 40,000
8. CASH	- 20,000	8. Commercial bank's account	- 20,000

This accounting treatment will allow us to see the following information on CB balance sheet:

- a) how much physical cash has been created, how much is in Central bank's vault (the difference is in circulation),
- b) the amount of outstanding loans from Central bank to commercial banks (genuine seigniorage which over time will become available to finance government),
- c) calculate the total amount of money (CBDC) created
- d) the amount of seigniorage that has *already been used* for government financing,
- e) the amount of CBDC in circulation in the real economy (the sum of balances on all accounts, except for Central bank's own account balance).

As can be seen from the accounting treatment, in one-circuit, market-based, sovereign money system, **the “asset tokens” i.e. the “real” or the “ultimate” money is** (i) physical cash or (ii) Central bank CRYPTOCURRENCY (anonymous crypto-currency issued by Central bank, should

Central bank decide to start issuing it). Peoples', companies', banks' and government's money in current accounts kept at Central bank, i.e. CBDC, represents a claim on Central bank which can be settled in exchange for (i) physical cash (through banks and bank-operated ATMs), or (ii) CB CRYPTOCURRENCY (via digital wallets). The respective legislation should be amended to define: **Legal tender** — within the borders of a country or currency area — is (i) physical cash, (ii) Central Bank issued CRYPTOCURRENCY, (iii) Central bank digital currency (CBDC) = “bank deposits” at Central bank, i.e. balances on accounts kept at Central bank. At least one of these payment forms *must be accepted* for lawful payment or settlement of all debt, public and private (eg. some stores may accept cash only, other ones may accept both, cash & cards, yet others card payments only).

To solve the dilemma about the official, Central bank issued cryptocurrency (CB CRYPTOCURRENCY) regarding how to make sure that (i) citizens keep their right to privacy, i.e. to be able to make secure, anonymous electronic payments with CB CRYPTOCURRENCY, and AT THE SAME TIME (ii) to prevent criminal activities, such as money laundering we recommend a simple solution. Central bank should keep cash in circulation and simultaneously start issuing anonymous CB CRYPTOCURRENCY. The system's architecture should allow CB CRYPTOCURRENCY be freely exchangeable for CBDC, i.e. “bank deposits” in accounts kept at Central bank, and vice versa. However, to prevent illegal activities, CB CRYPTOCURRENCY digital wallets should be designed in such way that there would be certain limits imposed on these anonymous digital wallets and payments, similar to ATM debit card limits. For example: (1) maximum amount of CB CRYPTOCURRENCY that can be kept in any one digital wallet at any given time would be, say, 5000 EUR; if there is another payment coming into a digital wallet which is full (already has 5000 EUR balance in it), the payment would not go through, (2) maximum daily spending limit, say 1000 EUR, (3) maximum weekly limit ....., (4) maximum monthly limit ....., maximum yearly anonymous CB CRYPTOCURRENCY spending limit = the limit on sum total of all outgoing payments in a calendar year ....., . These are just arbitrary limit numbers and further discussion/research/practice is needed to decide what the exact limits (and their combination) should be to achieve the best privacy for the people AND strong prevention against illegal activities.

Note: “*Commercial Banks' Conversion Liability to Bank of England*” and “*Conversion Liability to Bank of England*”, as illustrated in stylised balance sheets on page 54 of POSITIVE MONEY paper titled “Sovereign money — An introduction”, dated December 2016, should be renamed “**Bank of England Loans to Commercial Banks**” and “**Loans from Bank of England**”, respectively. This name is easier to understand and better describes what is actually happening — i.e. Central bank created all the money and initially put it into circulation by lending it to banks (and perhaps to other financial institutions).

### 3. LIQUIDITY IN CIRCULATION & MONETARY POLICY

As we've mentioned earlier, in a market-based, sovereign money system, MONEY is assets — currency units issued by Central bank — “freely” flowing in the economy in a one-circuit payment system. “Freely” in this context means “without equal debt necessarily attached to its existence”.

The purpose of monetary policy is to influence the amount of money in circulation in order to fulfil Central bank's mandate from a democratically elected government. The terms *money in circulation*, *money supply*, *stock of money* and *liquidity in circulation* are used as synonyms in this paper. We define *Money supply (M1)* as cash + bank deposits (balances) of accounts kept at Central bank, owned by government, commercial banks, households and firms. Should CB decide to start issuing its own cryptocurrency, it would be included in M1. The current balance in Central bank's own account(s), cash in Central bank's vaults, or cryptocurrency in Central bank's own digital wallet is excluded from M1 — because these assets are held in Central bank's possession — they are not in circulation.

It is important to say that in a market-based, sovereign money system, *monetary policy* is neither predominantly loose nor tight. Rather, it is always striving to strike a balance between various monetary goals (or targets, such as inflation, level of interest rate(s), exchange value, employment...). Central bank considers economic condition and outlooks before deciding on the scope of an appropriate monetary policy.

### 3.1 Standard monetary policy

**No direct interference in the open market** (or “market neutrality”) is the guiding principle of a *standard monetary policy*. Based on its effect on liquidity in circulation, there are three types of monetary policy:

- a) **loose** monetary policy — tools and measures are aimed at increasing the stock of money, eg. low interest rates, loose conditions for new loans,
- b) **neutral** monetary policy — tools and measures are aimed at keeping the stock of money roughly at the same level,
- c) **tight** monetary policy — tools and measures are aimed at decreasing the stock of money by removing part of liquidity from circulation.

The Central bank institutes a tight monetary policy in order to reign in inflation. Should prices in the economy start rising beyond Central bank inflation target, a market-based, sovereign money system offers effective *tight monetary policy* tools to cool demand for loans and restore price stability.

We distinguish three broad categories of *tight monetary policy*:

1. **Slow down** new money creation rate
2. **Stop** new money creation
3. **Remove** money from circulation, permanently or temporarily

### 1. **Slow down new money creation rate**

- a) A moderate *increase in base interest rate(s)*, also called “money creation interest rate(s)”, would make Central bank loans to commercial banks (and thus to banks’ clients) more expensive, which will lower demand for these loans, thereby decreasing the rate of new money creation.
- b) Other CB conditions and measures, eg. lowering *loan to value ratio*, may be used to cool demand for loans.
- c) Central bank may also *openly announce that it will simply stop issuing loans to finance one “loan category” for a specified period of time* (eg. for 6 months, it would not finance any new mortgages) while base interest rates in other “loan categories” remain unchanged.

Employing either option (or their combination) would mean that, in aggregate, M1 (i) will most likely keep rising but at a slower rate than before, or (ii) may stay constant — in case even a moderate hike in base rates causes demand for new CB loans to disappear completely).

Remember that existing loan repayments to CB and other CB profit is still transferred to Gov. account as seigniorage for spending and therefore stays in circulation.

### 2. **Stop new money creation**

This could be achieved by setting prohibitively high base interest rates (“money creation interest rates”) on ALL “loan categories” — so high that actually no one would be willing to borrow at this rate.

This would result in a de facto constant amount of money in circulation. M1 doesn’t increase nor decrease, because existing loan repayments to CB and other CB profit is still transferred to Govt. account as seigniorage for spending and therefore stays in circulation.

### 3. **Remove money from circulation**

- a) PERMANENTLY: money is deleted, this lowers Central bank balance sheet (see example below).
- b) TEMPORARILY: through direct market, repo operations. Given the generally accepted consensus on Central bank non-interference in the open market, this *tight money policy* tool would most likely be the very last one to be employed. We reckon it would be used mostly in abrupt, unexpected situations when a significant amount of money needs to be removed from circulation within a relatively short period of time (for example due to a sudden drop of productive capacity of the economy).

EXAMPLE:

The Central bank decides to remove 10 billion EUR from circulation within the next 12 months.

1. 1 billion will come from repayment of government bonds held by Central bank that matured during this period (shrinks CB balance sheet).
2. 6 billion will come from all commercial banks' loan repayments to Central bank within this period (shrinks CB balance sheet). Instead of transferring genuine seigniorage to central government account for spending, the money is deleted.
3. 1 billion will come from other Central bank profit made during this period (shrinks CB balance sheet). Central bank profit = genuine seigniorage from loan repayments + other profit (eg. from interest charged to banks). Instead of transferring the rest of the CB's profit to central government account for spending, the money is deleted.
4. 2 billion will be removed by direct market, repo operations. CB balance sheet doesn't expand nor shrink.

**CENTRAL BANK BALANCE SHEET**

<b>Assets</b>		<b>Liabilities</b>	
1. Government bonds (T-bills)	- 1 bn	1. Government's account	- 1 bn
2. Loans to commercial banks => New money creation	- 6 bn	2. Commercial banks' accounts	- 6 bn
3. Seigniorage => Zero-Coupon, Perpetual bond	- 1 bn	3. Central bank's account	- 1 bn
		4. Commercial banks' account	- 2 bn
		4. Central bank's "repo" account => Removed liquidity	+ 2 bn

The accounting treatment on Central bank balance sheet clearly shows that (i) **loose monetary policy** — i.e. in general, measures to make new Central bank loans more accessible — creates genuine seigniorage (a windfall central government profit from country's issuing its own sovereign currency) in step with demand for credit in the economy, at current base interest rates, while (ii) **tight monetary policy** may decrease the rate of, stop or even reverse (as seen in step 3. above) genuine seigniorage creation.

The inherently high, public and private debt that needs to be constantly serviced in a commercial bank money system is the main reason for:

1. Why our politicians and Central banks have a “mathematically simple” choice, a) perpetual GDP growth at all costs, OR b) economic system collapse.
2. Why economy running on commercial bank money can, even for years at stretch, find itself in a situation with simultaneous weak demand and near-zero interest rates. Put differently, because of high indebtedness people and companies are unwilling, or unable to take on more loans even at near-zero interest rates.

The solution to both problems is to switch from commercial bank money to market-based, sovereign money system. In a sovereign money system, the overall debt situation is very different — while, of course, there is some level of debt in the economy, most of liquidity flows “freely” in circulation, i.e. without equal amount of debt being necessarily attached to the very existence of the stock of money. Another way of putting it is — other factors being equal — both, *government* and *private Debt-to-GDP ratios* are significantly lower. That’s why *standard monetary policy* will work better and more effectively in this system as opposed to a bank money system. By “better” we mean that we can reasonably expect the demand for loans to be more sensitive to modest changes in interest rates. This simply means that companies and people who “carry less debt burden on their shoulders” are more likely to take new loans when interest rates are cut as opposed to those who have more debts. From this follows that an economy running on sovereign money is less likely to even reach a condition with no demand for loans at near-zero interest rates. Of course, near-zero rates could still happen, but they should be a rather rare occurrence due to some unforeseen, external factors, instead of being an inherent consequence of the money system in which, by design, money = debt. If, for whatever reason, standard monetary policy in a sovereign money system fails, Central bank can institute *special monetary policy*.

## 3.2 Special monetary policy

**Direct intervention in the open market** sums up the essence of *special monetary policy*. It is often seen as controversial because it usually is accompanied by at least one, or even a combination of, these side-effects:

- a) disproportionate price increase of selected assets (large price gains in short time period as a consequence of new money creation),
- b) artificial influence on exchange rate against foreign currencies (foreign governments might interpret devaluation of our currency as an unfair business advantage),
- c) (unjust) increase of inequality.

Therefore, Central bank should only use this policy when there is a real danger of deflation and economic recession. To give the economy a boost, Central bank needs to inject more money into circulation. Under normal circumstances, standard monetary policy (Central bank loans) create and pump new liquidity into the market-based, sovereign money system. However, if even near-

zero interest rates are insufficient to fulfil CB mandate, Central bank must consider special tools to avoid economic collapse. We distinguish the following *special monetary policy* tools:

1. Repurchase agreements, or “repos”,
2. Subsidised loans,
3. Quantitative Easing (QE) to buy government bonds only,
4. “Helicopter money”,
5. QE, or asset-backed securities purchase programme (eg. ECB 2015-2018).

Each of these tools will indeed increase the stock of money in circulation. However, each of them also has specific secondary effect(s), plus possible side-effects. Let’s look at the pros and cons of each in more detail.

### **1. Repurchase agreements, or “repos”**

These operations have a short-term, self-reversing effect on bank liquidity. From money creation point of view in a market-based, sovereign money system, “repos” are an emergency, liquidity management tool used to lessen banks’ short-term (mainly operational) liquidity risk.

### **2. Subsidised loans**

When near-zero interest rates no longer suffice to create additional demand for new loans, offering interest-free loans that *do not have to be paid back in full* may be considered as another option. For example, a loan that offers 25% discount on principle — meaning that only 75% of the loan principal would have to be repaid and the borrower would benefit by keeping 25% of the newly created money. As the 75% is repaid to Central bank in instalments, these become a part of government budget revenue through the mechanism of *delayed seigniorage* described in this paper.

**PROS:** Excellent possibility to (i) direct new funds into innovation and transitioning to green economy without tax hikes, OR (ii) support development of underdeveloped regions. Innovators who do the work of creating new, cleaner products and services, or take the business risk to start new business would keep part of new money creation profit (seigniorage).

**CONS:** Profit from new money creation is not as “perfectly equally” divided among citizens as in “helicopter money”.

### **3. Quantitative Easing (QE) to buy government bonds only**

This tool pumps new liquidity into circulation AND AT THE SAME TIME supports *selected* national governments by increasing demand for their bonds.

**PROS:** This lowers interest rates at which these governments borrow in the open market, and thus lowers the cost of servicing public debt.

**CONS:** Politicians must agree on specific rules IF / WHEN / WHICH GOVERNMENT’S BONDS / IN WHAT VOLUME this practice is permissible. Also, usually “richer” people own government

bonds, therefore it is the “richer ones” who receive the newly created money. They get to decide IF or HOW to spend this money. Depending on a particular situation, these spending decisions may OR may not have immediate, positive impact on boosting aggregate demand.

#### 4. “Helicopter money”

See also “Helicopter money” on page 10. This tool allows Central bank to increase liquidity in circulation by creating new money and making equal payments to all citizens.

##### PROS:

- a) if distributed in a way which ensures that citizens spend the money in the economy within a certain period of time then this may be the most direct CB tool for boosting aggregate demand almost immediately without increasing debt burden in the economy,
- b) individual people benefit “perfectly equally” from new money creation profit (seigniorage).

##### CONS:

- a) if payments are distributed among people with no strings attached then *there is a risk that* — during these uncertain economic times when CB mandate allows for the use of “helicopter money” — most people would keep the money (increase savings) or pay off their debts instead of spending it. This would result in a need to create (“print”) more “helicopter money” for the people so that this time around they (hopefully) actually spend it in the economy,
- b) we must remember that this tool boosts demand in the *existing* economy which may not be (actually is not) sustainable. Such boost sends a signal to the economy: “Produce more of these unsustainable goods and services!”. In such case, a great opportunity is missed for directing newly created money into transitioning to green, sustainable economy,
- c) “helicopter money” breaks the basic “separation of powers” rule. One “player” — Central bank — unilaterally decides (i) when to create new money, (ii) how much new money will be created, and (iii) how it will be used (equal payments to citizens),
- d) using this tool is likely to change peoples’ beliefs about the “value of our currency” which may have unpredictable / unintended consequences, economic and otherwise.

#### 5. QE, or asset-backed securities purchase programme (eg. ECB 2015-2018)

This tool allows Central bank to increase liquidity in circulation by using newly created money to buy stocks or bonds in the open market.

##### PROS:

- a) increases stock of money by pumping new, debt-free money into circulation in hopes that some of it will “trickle down” to create jobs and boost real economy,
- b) devalues currency thus creates competitive advantage against other economies,
- c) unlike “helicopter money”, QE doesn’t go against current societal beliefs about money.

**CONS:** This is the most controversial method (therefore least recommended in a market-based, sovereign money system) because it causes a combination of all these side-effects

- a) disproportionate price increase of selected assets (large price gains in short time period as a consequence of new money creation),
- b) devalues currency, i.e. citizens must pay more for imports,
- c) (unjust) increase of inequality,
- d) exposes Central bank balance sheet to inappropriate external risks,
- e) breaks the basic “separation of powers” rule. One “player” — Central bank — unilaterally decides (i) when to create new money, (ii) how much new money will be created, and (iii) how it will be used,
- f) distorts markets, huge amounts of new money created and entered into circulation with questionable long-term benefits for the society.

As we can see, all of these *special monetary policy* tools do increase the stock of money in circulation. However, it is also their secondary effect(s) AND possible side-effects that must be considered — in a particular economic context — before the right policy is chosen.

### 3.3 Greening monetary policy

As the saying goes: The bigger the problem, the bigger the opportunity. Taking the above mentioned reasoning into account, it seems sensible to propose that Central banks should use monetary policy in such way that would make it a priority to support and expedite our transition to a green, sustainable economy. For example, one way to achieve this is to have government create an official list of green-project priorities for 10-20 years to come which would be financed (subsidised) from state’s yearly budgets. To fulfil its price stability mandate, or in case a recession comes, Central bank could decide to allocate a certain *amount* of “loan subsidies” financed with money creation. Eg. through *subsidised loans* the CB would inject (partly debt-free) fresh liquidity into next-in-line, government-approved, green investment priorities. This approach would ensure *coordinated* investment into transition towards green economy while also preserving separation of powers (CB decides the amount of new funds; next-in-line govt. priority is how new money would be spent).

### 3.4 Central bank's “signalling function” and human psychology

A deeper wisdom and balanced understanding is necessary to “shift gears” from conferences and theory to implementation and practice. Rate decisions and other Central bank actions & announcements have traditionally been important “signals” for the markets. The (perceived) “value of our currency” and human psychology (beliefs) are also interconnected. Right now, people and politicians strongly believe: “You can’t just print money and give it away to everyone for free.” This is part of why people see money as something valuable. “We must give something back (asset or labour) in exchange for money. No one will give us free money — there is no magic money tree!” resonates in our collective consciousness. All money reformers must be aware that some monetary policy tools, eg. “helicopter money”, would go directly against this deep-rooted, societal belief. On the other hand, this very same belief is one of the factors that gives our

currency “value” in our minds. We’d like to make it clear that we are not taking positions *pro* OR *against* “helicopter money” in this paper. We are simply pointing out that it needs to be seriously considered that if Central banks show (prove) to people that it can print new money and give it away for free to everyone then there might be some unexpected / unintended political side-effects accompanied by — even if only perceived — *change* in “value of our currency”. And people have a tendency to act upon what they perceive and NOT on what the “real” reality is. Economy is about people, their decisions and (sometimes irrational) behaviour. Even if CB technically doesn’t overshoot new money creation with “helicopter money”, but with very moderate amount (compared to 2,6 trillion recent ECB QE) of newly created money distributed to citizens “for free” it “only” *destroys the perceived value of our currency* in our “collective mind”, then we simply don’t know the scale of market reaction / consequences (economic, political and other) which might follow. For example, imagine that ECB adopts and announces “helicopter money” in the Eurozone. Just like before Brexit vote, it’s easy to predict that some politicians with access to main news media will vehemently oppose such “unheard of” tool as “helicopter money”. They might, as is usual in politics, start playing the “fear card” by claiming that “Brussels is about to destroy peoples’ hard-earned savings by allowing/directing ECB to print new “unbacked” euros and giving them away for free to everyone!”. This argument might sound reasonable to people who know nothing about monetary policy because (i) they’ve never heard of printing “unbacked” money AND giving it away to people for free, and (ii) they intuitively know that if you start giving out something to EVERYBODY for free, that “something” gradually loses its “value”. If, as a result, a majority of Eurozone citizens panic and “flee for safety” by exchanging significant amounts of euros for other major currency, say, dollar or yen, then who can predict the scale of consequences to EURO currency and Eurozone economy? It is clear that whatever money system in place, and whatever tools Central bank decides to use, in general, it avoids actions or announcements which would fundamentally undermine markets’ (read peoples’) confidence.

Central bankers would use their practical experience and expertise to create & fine-tune different variations and combinations of *standard (and special) monetary policy* tools to smoothly manage country’s stock of money and achieve their main objective — target inflation — in the good, as well as in the not-so-good, economic times.

## CONCLUSION

High-indebtedness has always been the backdrop against which all recent financial crises emerged. To mitigate the risk of future financial system meltdown, humanity needs to find a global, systemic solution to significantly deleverage both, public and private sector. **One-circuit, market-based, sovereign money system WITH SEIGNIORAGE** described in this paper proposes exactly such solution. If implemented, through the **mechanism of *delayed seigniorage***, it will enable a significant public and private sector debt reduction (i) without compromising current consensus on Central bank’s independence, (ii) without overexposing

system's stability and day-to-day operation to human factor errors — MPC's wrong estimates in *the volume of public money creation*, (iii) while minimising possible corruption or special interests' interference in systemic processes of public money creation.

This reform is designed to make sure sufficient credit is always available where it is needed — in the real economy. While making state-owned Central bank an exclusive issuer of all money (physical cash and digital currency), money creation decisions will remain linked *directly* to demand for money in the market — as is the case today. This reform will also put more powerful tools into Central bank's tool box, such as **setting several base interest rates** (instead of just one), which will actually make it possible to cap excessive money creation (and stabilise prices) in selected sectors of economy while avoiding causing recession in others.

To sum up, if implemented, this financial system reform will gradually reduce high levels of debt in our society while providing **additional government budget income without raising taxes**. What's more, Central banks (i) will be able to carry out a more effective monetary policy to reach target inflation, (ii) will have *better control* of the stock of money, which they will exert with the aim to support a well-working, green, sustainable economy, and (iii) will have new monetary policy tools in their toolbox — along with clear guidelines for when and how they may be employed — to boost aggregate demand during recession, such as a) interest-free loans (eg. to build new homes) — principle must be paid back in full, b) interest-free loans to finance special investment (designated by government) with discount on principle, eg. green projects — only part of principle, say between 25% and 75%, must be paid back, c) “helicopter money”, and others.

Global debt at record level, current geopolitical situation (Brexit, Hong kong, U.S.-China trade relations), inverted yield curve. These are strong indicators of a looming financial crisis. The time has come for money reformers, Central banks & politicians to “switch gears” from conferences to implementation, from theory to practice. I wrote this paper with the intention to bring a critical mass of people from all walks of life (and all “schools of thought”) together in balanced understanding of what history has proved works (and doesn't work) in the two opposing — state vs. private — money systems. With this insight, it's finally feasible to create a comprehensive money reform proposal that actually works — one, around which money reformers (and politicians!), even with long-standing, seemingly irreconcilable differences, can unite. And unity turns ideas into reality... Let's change money — and the world, now!

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