

# **SOLIDAR: A demurrage based currency to prevent systemically induced crises.**

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**ABSTRACT:** Financial crises are accompanied by market participants that are unable to repay their debts and financial institutions that are lacking liquidity [1].

Analyzing the cause and the effects of financial crises, it can be observed that interest rates are low during stable, good times while they are higher during financial crises what multiplying the effects of market sentiments..

As crises in the conventional central banking (CB) money systems occur on a regular basis, the questions arises if they are systemic and how can they be avoided to make money systems more stable and less volatile.

Demurrage - a conceptual fee on money holdings can incentive spending, create the needed liquidity during times of low investments and create a sustainable and fixed money supply. As demurrage currencies are created without debt, the need for systemic debt to create liquidity is erased [2].

## **1. Introduction**

The dominant financial system today is money issued by central banks. Although there are some regional differences the principle of money creation is comparable within the global banking system. New money is issued when market participants take up new loans while the supply and demand is regulated mostly by interest rates set by the central banks, transferring the decision how much liquidity is produced to the markets [3].

As the markets are much less rational and more emotional than often suggested [4] transferring the decision issuing new money can multiply the problems induced by too much liquidity during good times and not enough during downturns.

Given this inadequate way to regulate, the central banks introduced another way to increase liquidity. The so called "Quantitative Easing" is the purchase of assets by a central bank [3] to compensate for the failures of the interest driven money creation policy.

Although CB money is the dominant form of money issuing, other forms are also possible:

- Bitcoin: new money is printed by market participants, following fixed rules (comparable to Gold mining).
- New money is Issued through governmental spending.
- New money is issued through a citizens dividend (BasicIncome).

## **2. Demurrage**

Demurrage is a timed fee on money that increase the liquidity inside an economy by discouraging hoarding. As the main payment system has an increased circulation speed, savings can be hold in contracts (loans) or other forms of storable goods (e. g. Gold, Bitcoin).

The idea that was articulated by Silvio Gesell is that income (monetary), like food, healthcare and so on is a necessity. By allowing money to be hoarded the society takes away the possibility from monetary weak individuals to use that money for wealth creation through selling produced goods [2].

This is not only a problem for the individuum, because the only sustainable source for economic wealth creation (economic activity) is inhibited by hoarding the dominant mean of exchange.

In 1932 an experiment started in Woergl in Austria to use a local money that had a fee to be payed (1% of its value each month) to be kept valid. The newly elected mayor - Michael Unterguggenberger was familiar with the work of Silvio Gesell [2] and used his theories to develop a demurrage currency that was backed by fiat currency but had an important difference. The notes created were timed for 1 month before they expired. The owner then had to pay a 1% fee to revalidate the note for the next month. Because a stamp needed to be applied each month, everybody who was paid with the note made sure he or she was spending it quickly, automatically providing income and work for others. And indeed the demurrage shillings had created 12 to 14 times more paid work then the comparable amount of shillings without demurrage [5].

Although the experiment was very successful compared to the aims that Unterguggenberger had articulated prior (lowered unemployment rate and increased investments), it was forbidden after a 11 months period, by the national bank.

What is needed to make such successful experiments more resilient to the agendas of centralized institutions is an international, decentralized approach that can be used by individuals without the interaction of local authorities.

## **3. Basic Income and Flat-Rate Tax**

As described above the money supply in demurrage currencies is constantly reduced. To keep the money supply stable it is needed to constantly issue new money at the same rate. In contrast to the Fiat money systems a stable money supply is to be favored to prevent extreme income inequalities that build up in inflationary money systems and to keep product prices at comparable levels.

The question that is to be addressed in money systems is how fresh money is to be issued fairly. In the dominant money systems worldwide, money is issued by banks that grant loans. These banks are the big profiteurs as they pay less interest than small debtors dependent on the loans from intermediaries.

Another possibility is to issue money through governmental spending what could easily lead to hyperinflation in inflationary systems. A third way that is discussed on a broader range the last years is a Basic Income that could also lead to an increased danger of hyperinflation and less trust in the monetary system.

Combined with demurrage money both issue methods (governmental spending and a Basic Income) can be introduced without the need of central banks that control the money supply and the price increase that the federal banking system enforces on small debtors.

If the demurrage rate is high enough the need for other taxes is strongly reduced and can lead also to a simplification of taxation (flat-rate tax).

#### **4. Decentralization**

As described above the Woergl experiment showed that centralized projects are very easily attacked and shut down. The intervention of the national bank is only one example that shows that centralized organisation structures are much less resilient than decentralized structures. The Solidar cryptocurrency issued by the WINC association therefore uses the blockchain technology first developed for Bitcoin [6] as a decentralized ledger.

As the technology evolves many of the centralized tasks (organize Basic Income and Flatrate Tax payouts, set demurrage rate, organize promotion and other) that are now administered by the association may be also available as decentralized services. Until these services become reliable and most important customer friendly enough, the best way seems to use a mixed approach.

#### **5. Vouchers**

When the Solidar (Formerly known as Worldleadcurrency) network started (23.11.2014) the legal status of cryptocurrencies was unclear. Therefore Solidar is issued by the WINC association as vouchers as there is a complete set of rules to handle them and blockchain is only the form of ledger.

#### **6. Summary**

The money policy of central banks using indirekt stimuli to regulate money supply discriminates small investors and producers of goods and services. Therefore inflation is no suitable measure to discourage spending and induce money circulation. A much better approach is to degenerate money on a regular basis.

A much fairer and more sustainable approach, because more people directly profit from, is to issue money however, is a Basic Income or via governmental spending.

Decentralization is a wide field to make money structures more democratic and more resilient to short term and private interests. To actively embrace decentralized solutions is a task for our

common, solidaric future and will be crucial in many fields influenced by technology today. Solidar is not only trying to decentralize the organizing structures but mostly to decentralized money creation to make single points of failure less likely and our money system more stable.

## References

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