



**FOCAFET**



# **SYNZERIS**

## **Synthetic zero rate instruments New stability enhancing instruments for (digital) monetary regime changes**

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London - September 9<sup>th</sup>, 2016

Numerological date = 9 - 9 - 9 (2 + 0 + 1 + 6 = 9)



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# 1 Background: Who I am and what I do

## Who I am



Floris Kleemans

1971

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**ABN·AMRO**

Former Group Head of Strategy

## What I did / do



**FOCAFET**

Founder



**UETP**



**DENARS**

## 1

## Background: The Netherlands known for radical innovation in digital and finance

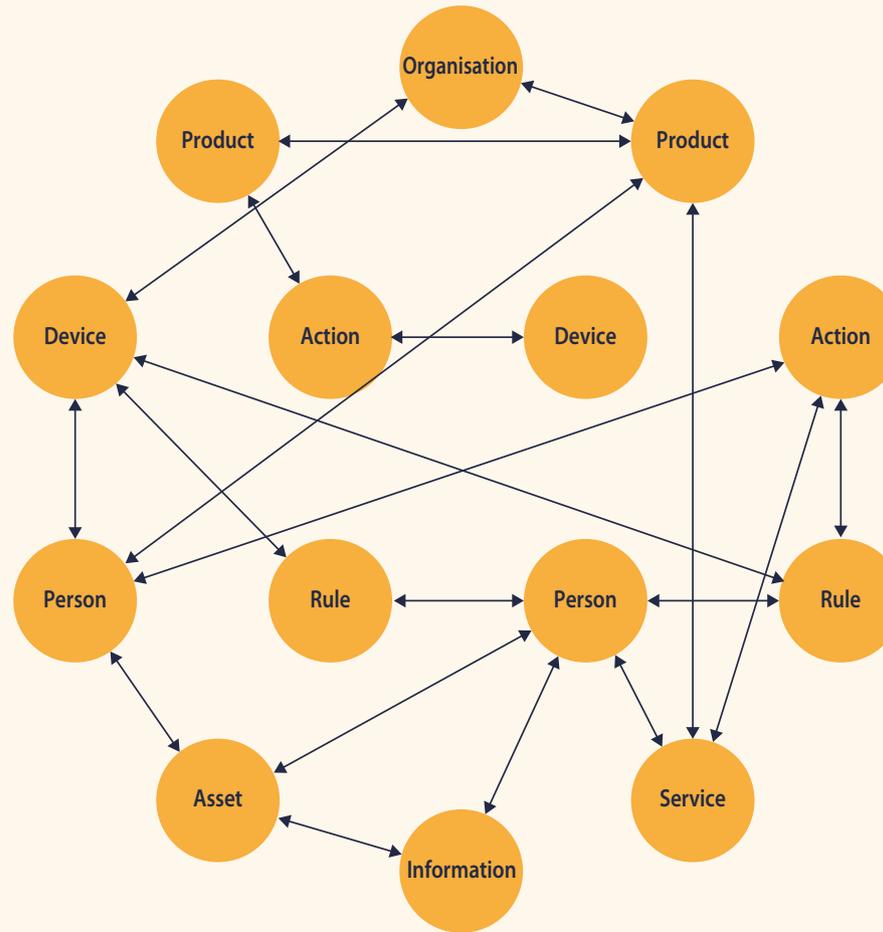
### Globally first recorded inventions in economics

- Equities and equity markets
- Central Bank
- Concept of limited liability
- Multinational company
- Dutch auction
- Corporate governance / CSR
- International law / law of sea
- Investment / mutual fund
- Market-oriented economy
- First liberal society (not subject to kings, etc.)
- First federated government
- First 'middle man' economy
- National macro-economic model
- Nation with highest (digital) connectivity
- Invented CD, DVD, Blu-ray, Bluetooth, Wifi
- (co-) invented distributed computing
- Highest adoption of bitcoin / blockchain
- Amsterdam is largest High Frequency Trading hub
- First nationwide e-commerce payment system
- Headquarters most payment service providers as the Netherlands are seen leading innovation
- 100% cash economy (no cheques)
- Lowest transaction banking fees / Highest STP
- Leading co-founder in most international e-commerce standards
- Amsterdam considered world's most liberal city

**New digital peer-to-peer internet is evolving rapidly with the Netherlands as epicentre**

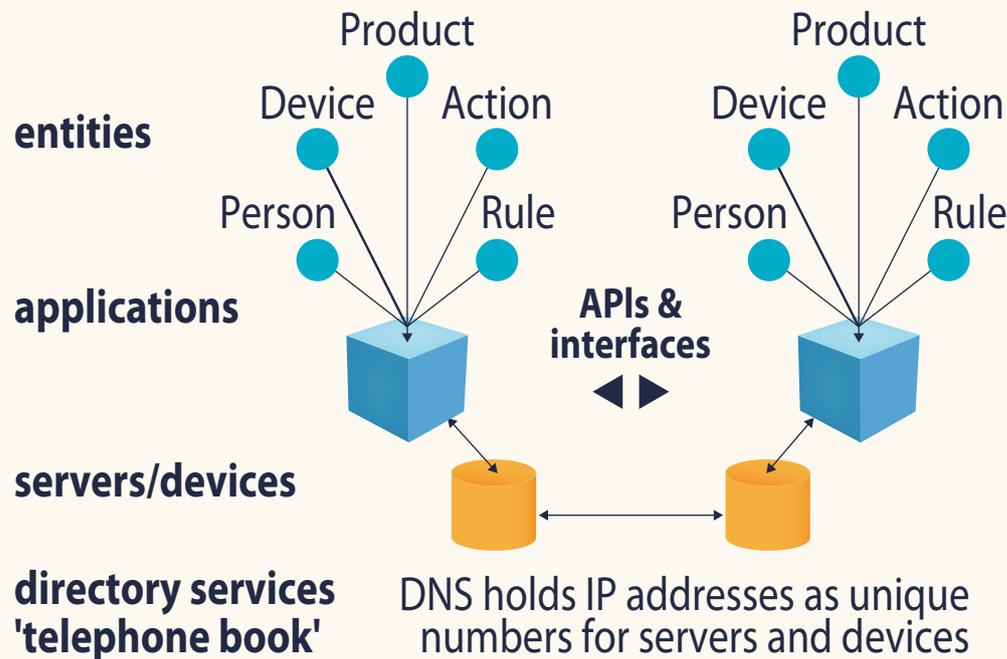


## 2 The emergence of new peer-to-peer and digital technologies- I

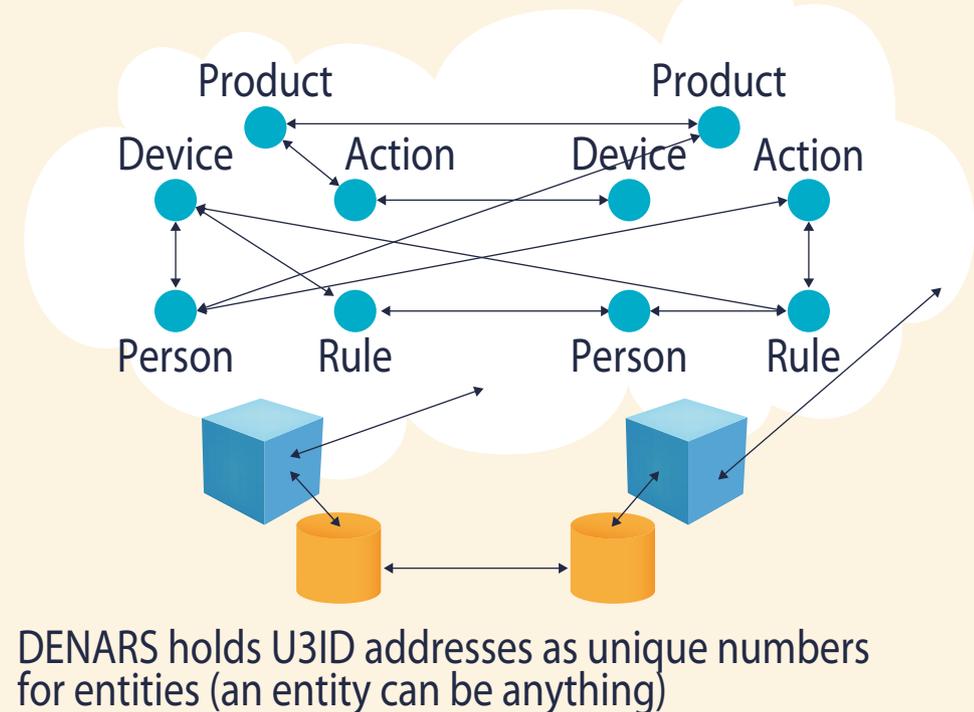


# 2 The emergence of new peer-to-peer and digital technologies - II

## Traditional internet



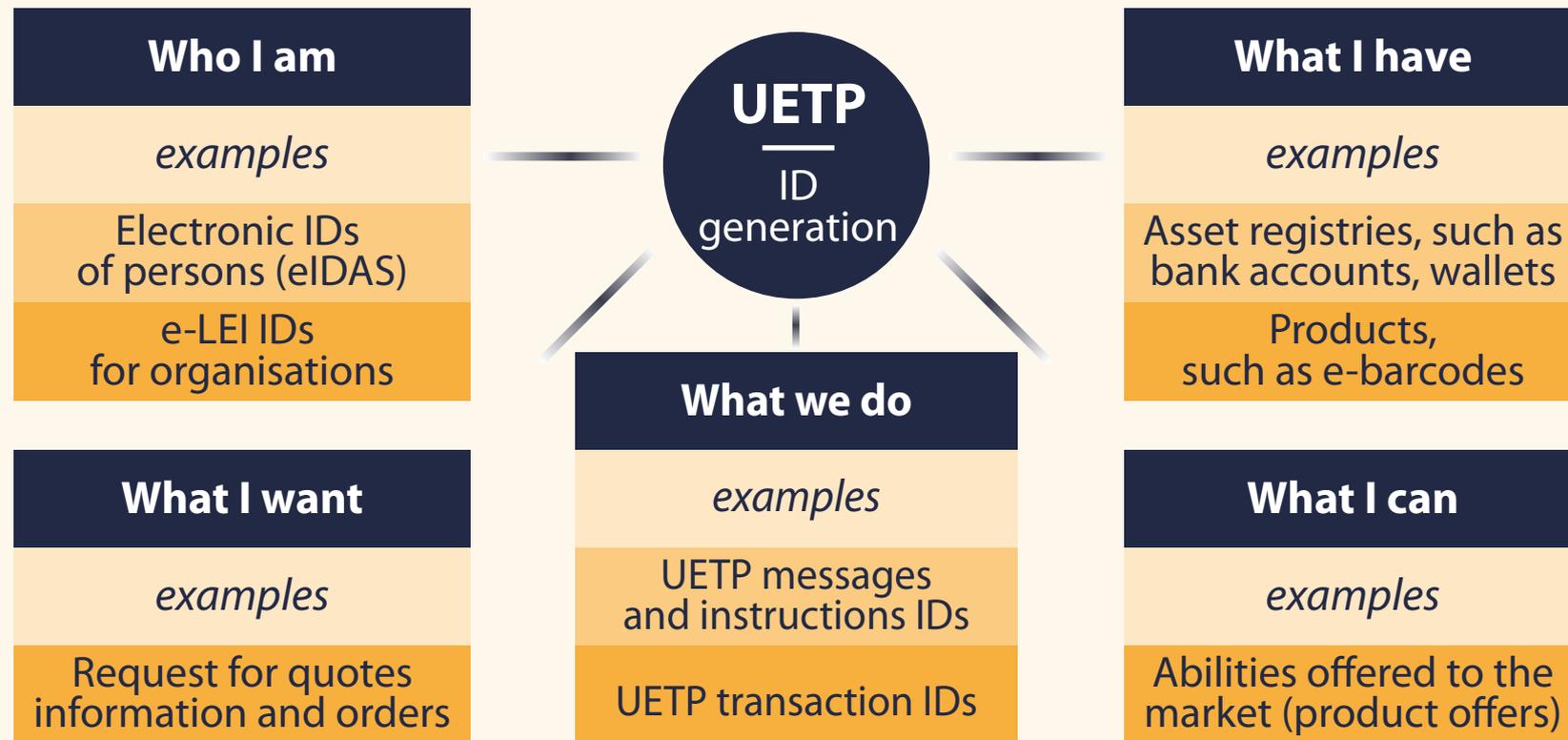
## Internet of entities



**Real time atomic direct peer to peer connectivity and interaction**  
Quickly being adopted in the background throughout society in the Netherlands and increasingly abroad



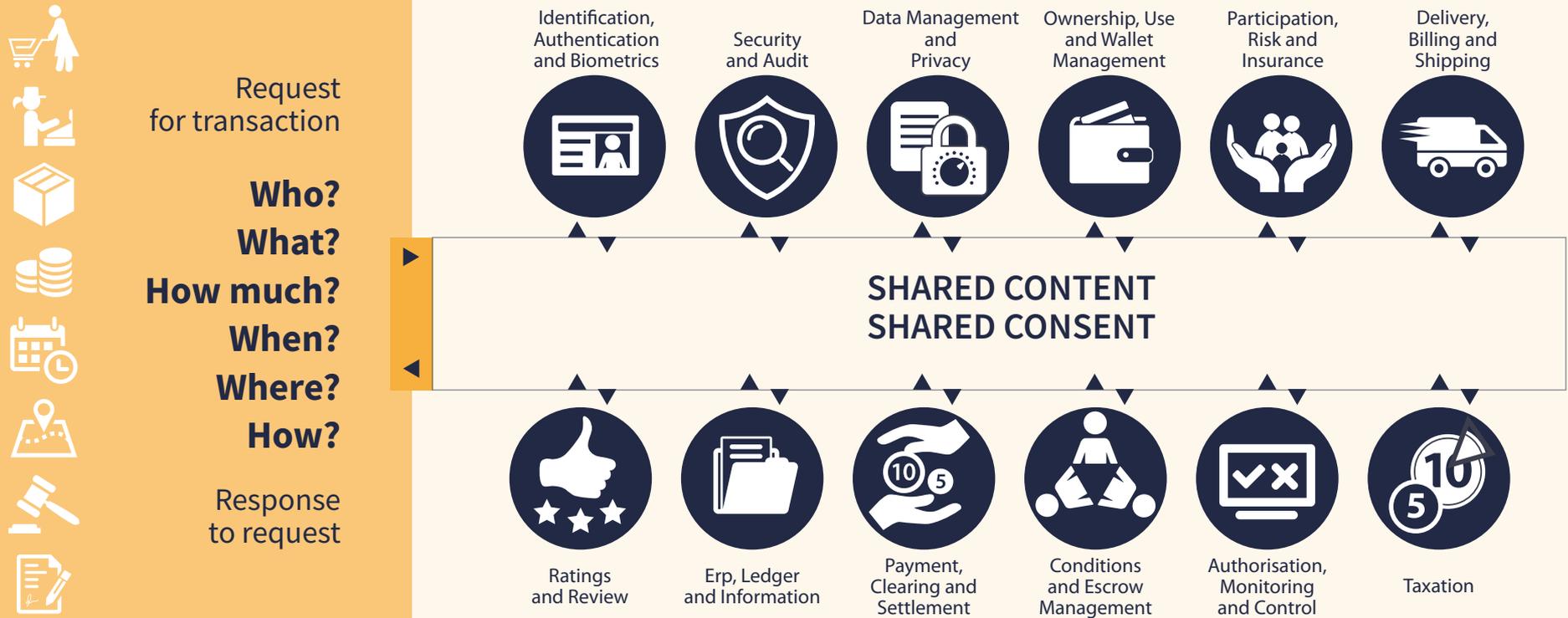
## 2 The emergence of new peer-to-peer and digital technologies - III



The ability to define legal entities, liabilities, demand, supply and transaction creation, clearing and settlement with simple semantics

# 2 The emergence of new peer-to-peer and digital technologies - IV

## Smart contract among different stakeholders with UETP



Working and living together in group chats with smart contracts, automated jurisdiction, competent authority and rule detection and clearing and settlement abilities

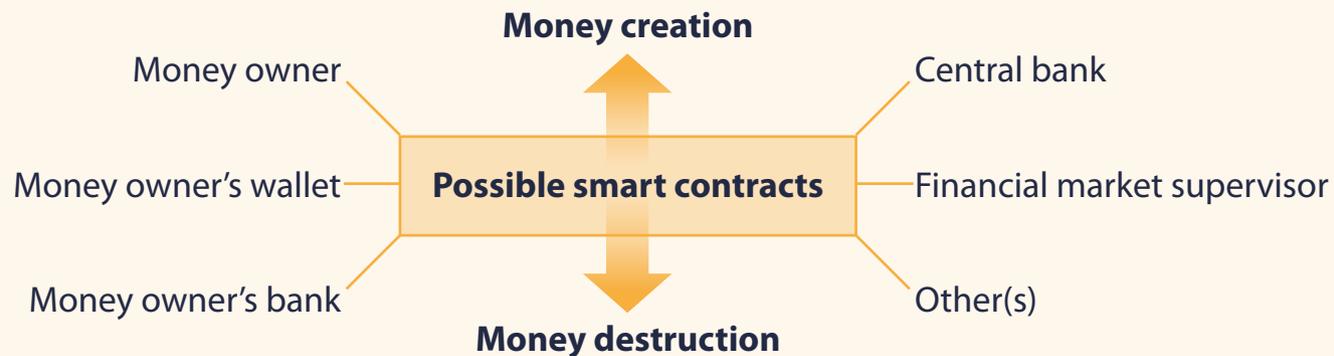
# 3

## The concepts of dualistic and non-dualistic money

### Money supply management as a dualistic process in a fractional reserve banking system



### Money supply management as a non-dualistic process with digital entities or assets



# 4

## Dualistic money - I

Balance sheet	
Active	Passive
Use of means	Means



The duality of our financial-monetary system originates from our dualistic accounting view: Everything is described twice, as means and as a use of means.

# 4

## Dualistic money - II

<b>Balance sheet and roles of a bank</b>	
<b>Active</b>	<b>Passive</b>
<b>The bank as a creditor</b> <ul style="list-style-type: none"> <li>- mortgages</li> <li>- corporate loans</li> <li>- credit cards</li> <li>- other loans</li> </ul>	<b>The bank as a debtor</b> <ul style="list-style-type: none"> <li>- current accounts</li> <li>- deposits</li> <li>- bonds</li> <li>- other</li> </ul>



This concept of duality also revert back to our banking system. Banks act both as creditors and debtors.

We tend to manage our banks from right to left. We ought to secure a solid right hand side in order to engage in business on the left hand side.

# 4

## Dualistic money - III

<b>Balance sheet and roles of a bank</b>	
<b>Active</b>	<b>Passive</b>
<b>The bank as a creditor</b>	<b>The bank as a debtor</b>
<b>Monetary reserve buffer</b>	



From many perspectives and in many situations the two sides are not exchangeable in real time. That's why we manage matters conservatively and for instance keep reserve buffers.

# 4

## Dualistic money - IV

### The process of money creation in a fractional reserve banking system

Balance sheet of a bank before		Balance sheet of a bank after	
Active	Passive	Active	Passive
- Existing assets	- Existing liabilities	- Existing assets	- Existing liabilities
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	- New debt	- New money
<b>Monetary reserve buffer</b>		<b>Monetary reserve buffer</b>	



By cause and time, the process of money creation runs the opposite direction over the balance sheet as the accounting view.

Money creation originates from debt creation. If I want to have a mortgage, I first sign a debt agreement, after which, almost instantly, money is created.

# 4

## Dualistic money - V

### The process of money destruction in a fractional reserve banking system

Balance sheet of a bank before		Balance sheet of a bank after	
Active	Passive	Active	Passive
- Existing assets	- Existing liabilities	- Existing assets	- Existing liabilities
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
- Debt to be repaid	- Money to repay		
<b>Monetary reserve buffer</b>		<b>Monetary reserve buffer</b>	



By cause and time, the process of money destruction runs the same direction over the balance sheet as the accounting view.

Money destruction results in debt destruction. My credit and debit account with the bank are both reduced when I pay back debt.

# 4

## Dualistic money - VI

Balance sheet of capital markets			
Assets		Liabilities	
Assets	100	Liabilities	100

+

Balance sheet of money markets			
Assets		Liabilities	
Assets	100	Liabilities	100

+

Typical balance sheet of banks			
Assets		Liabilities	
Overdraft	100	Cash accounts	95
Credit cards		Deposits	
Working capital		Savings (owed)	
Loans		Bonds (owed)	
Mortgages		Other	
Bonds (owned)		<b>Equity</b>	
Other		Shareholders' equity	5
<b>Total</b>	<b>100</b>	<b>Total</b>	<b>100</b>

▼

Assets		Equity and Liabilities	
<b>Monetary debt</b>		<b>Monetary wealth</b>	

≈

By cause and time, there is a very strong dualistic relation between money and debt.

Especially in times of heavy indebtedness, the social license to operate may come under pressure as people will feel that their debt relates to some one else wealth. Moreover, their debt reduction only seems to be realised by wealth reductions of others.

Monetary theory could look more into the holistic functioning of the system.

# 4

## Dualistic money and interest

### The process of charging interest in a fractional reserve banking system

Balance sheet of a bank before		Balance sheet of a bank after	
<b>Active</b>	<b>Passive</b>	<b>Active</b>	<b>Passive</b>
- Existing assets	- Existing liabilities	- Interest (future debt)	- Existing liabilities
-	-	- Existing assets	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
<b>Monetary reserve buffer</b>		<b>Monetary reserve buffer</b>	

Still, the dualistic relation between money and debt is imbalanced through compounding interest.

For the interest payments on debt, no new money is created.

With positive interest rates, the system will have more future debt than current money.

We hence need new money (read inflation) in order to pay back our rising debts.

But we just saw that money creation **ORIGINATES** from (interest bearing) debt creation.

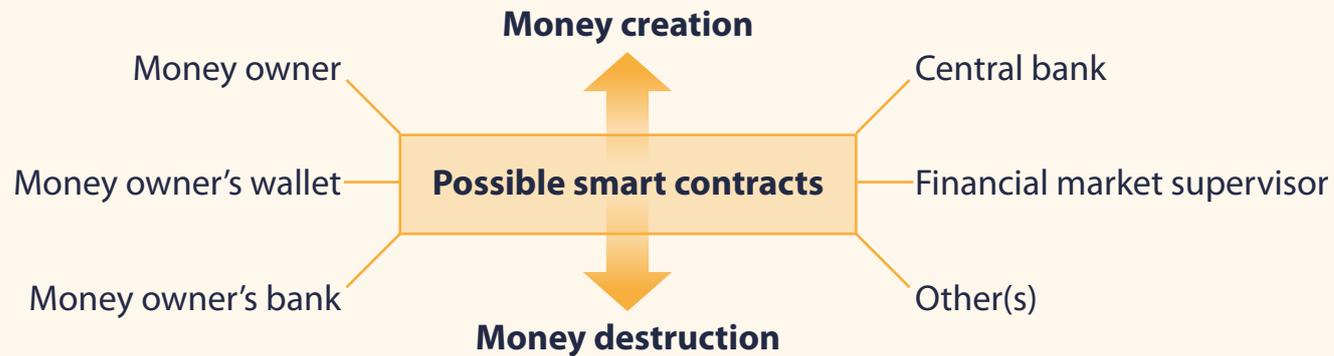
If I take out a mortgage of EUR 250,000, including interest, I may have to repay EUR 400,000.

Where do I find the extra money? What applies to me, also applies to the financial-monetary system at large.

# 5

## Non-dualistic money

### Money supply management as a non-dualistic process with digital entities or assets

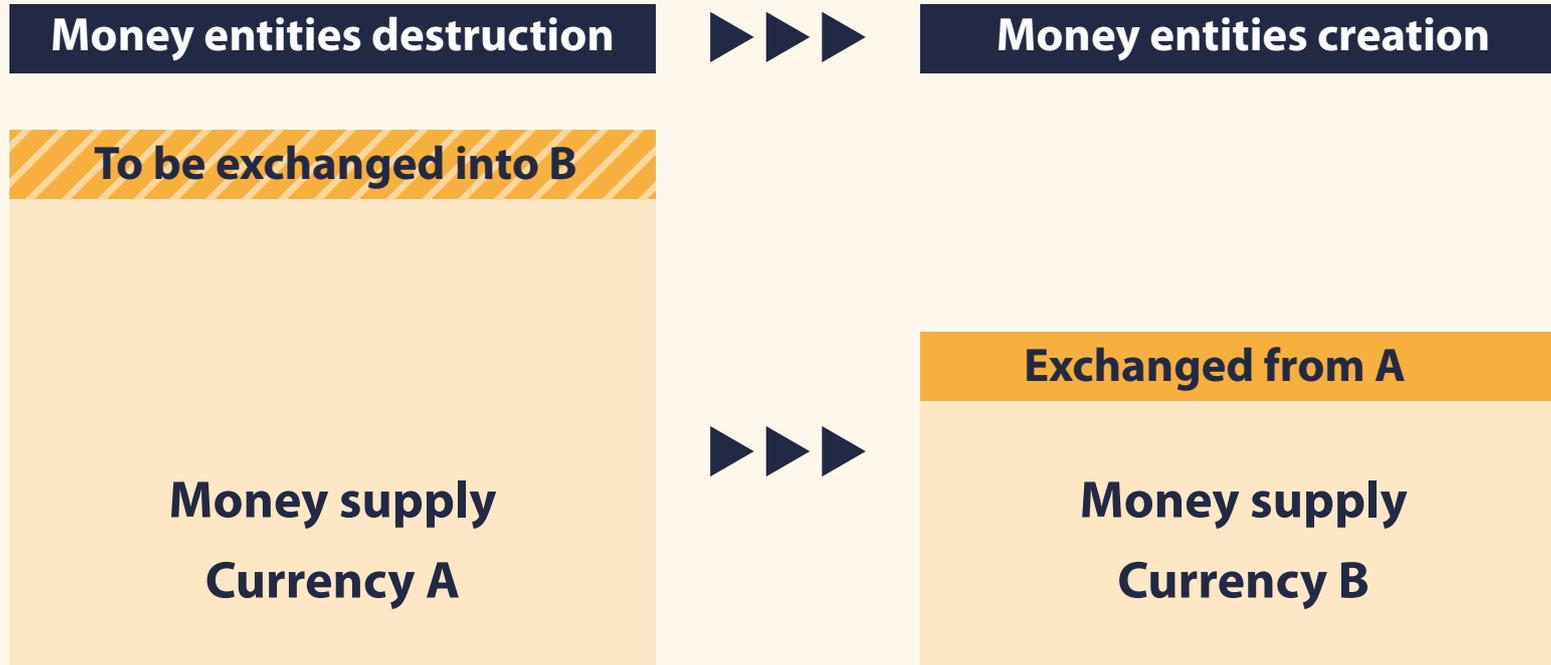


Accounting wise, non-dualistic money only appears as a non-dependent state.  
It either 'is' or 'is not'.

## 5

## Non-dualistic money

## Managing intrinsic value in the total money supply



# 6 Demand for non-dualistic money

## What do we really care about?

In the end, economic agents do not care about absolute levels of price stability.



Economic agents do care about the relative purchasing power of their money.



A positive inflation target compromises that relative purchasing power

# 6 Demand for non-dualistic money

## Abandoning the (scientific) notion of risk free money in fractional reserve systems

Money with (positive) inflation targets  
cannot be considered risk free.



There is even an intention to create quantifiable losses

# 6

## Demand for non-dualistic money

### Inflation from a portfolio perspective

A 2% inflation target proposition compares to a:

BB rated investment with a 40% expected loss rate over 1 year  
 BB/B rated investments with a 40% expected loss rate over 5 years  
 B/CCC rated investments with a 40% expected loss rate over 10 years

Example of S&P default rate table			
Rating	1 year	5 year	10 year
<b>Investment grade</b>			
AAA	0.0%	0.1%	0.6%
AA	0.0%	0.3%	0.9%
A	0.0%	0.6%	1.9%
BBB	0.0%	3.1%	6.6%
<b>Speculative grade</b>			
BB	1.2%	12.7%	24.0%
B	5.9%	30.5%	44.8%
CCC	30.4%	56.0%	67.7%

Expected losses of same default rate table with an expected loss rate of 40%			
Rating	1 year	5 year	10 year
<b>Investment grade</b>			
AAA	0.0%	0.0%	0.2%
AA	0.0%	0.1%	0.4%
A	0.0%	0.2%	0.8%
BBB	0.0%	1.2%	2.6%
<b>Speculative grade</b>			
BB	0.5%	5.1%	9.6%
B	2.4%	12.2%	17.9%
CCC	12.2%	22.4%	27.1%

... and this is before we are exposed to credit, liquidity, interest, market and systemic risks!

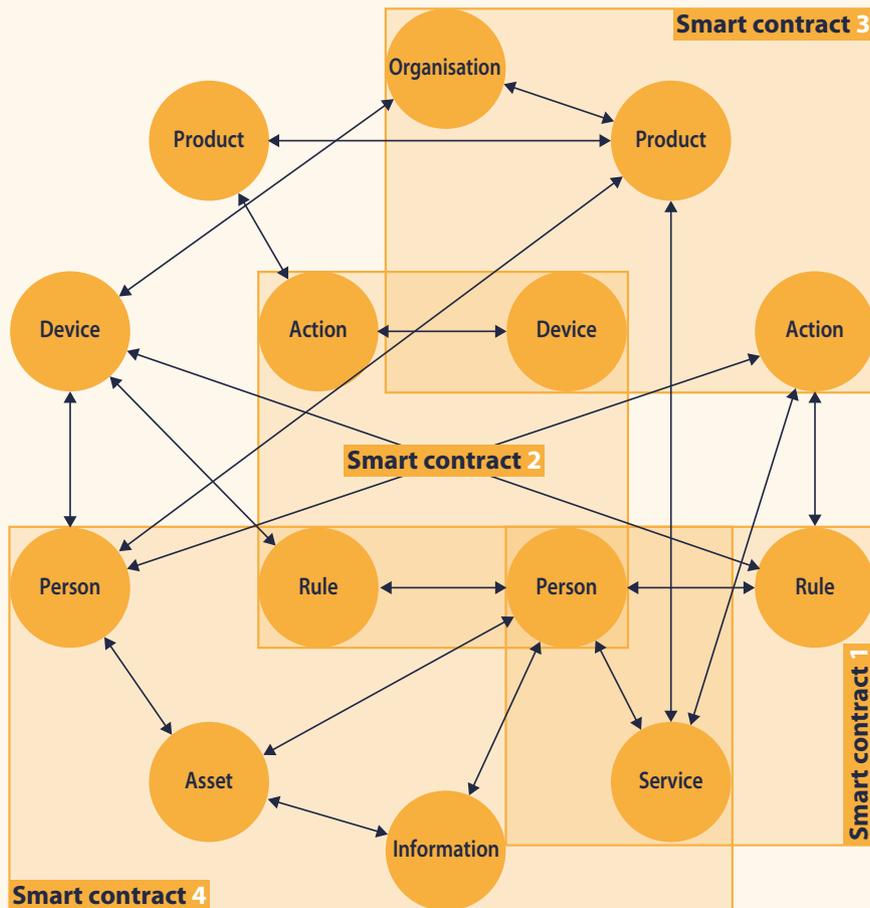
# 6 Demand for non-dualistic money

**Purchasing power management = Relative scarcity management**

**Comparison example of digital gold vs traditional gold vs traditional fractional reserve currencies**

	'Digital gold'	'Traditional gold'	'Traditional fractional reserve money'
Average productivity growth per year	2.0%	2.0%	2.0%
Monetary policy	'Fixed scarcity'	'Mining for more gold'	Inflation target of 2.0% per year
Annual changes in the 'money supply'	0.0% Supply constant and fixed	1.5% Average annual growth gold stock	4.0% Inflation target plus productivity growth
Annual changes in purchasing power (relative scarcity)	2.0%	0.5%	-2.0%
Financial risks to hold	-	-	Credit-, interest-, market-, liquidity and system contagion risks

# 6 Demand for non-dualistic money



Extreme systemic preference for smart contract clearing and settlement free of:

- debt
- claims
- liabilities

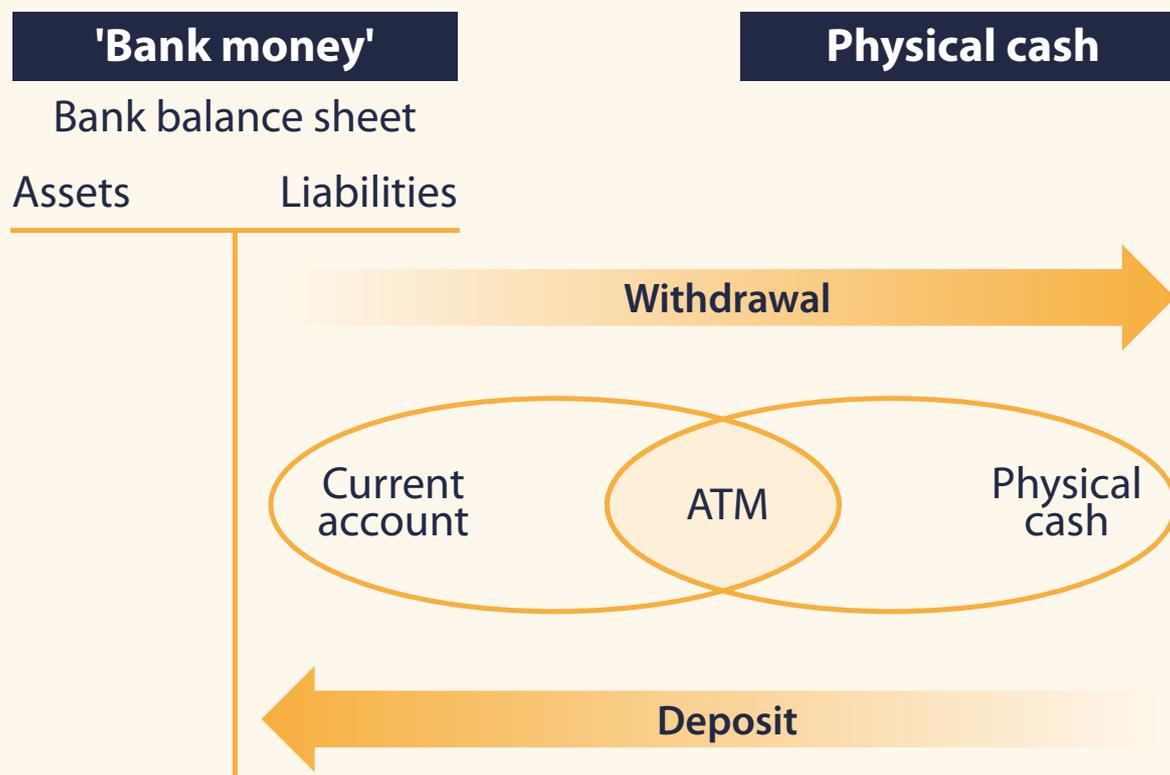
High frequent point to point interaction requires undisputed states of essence. No double spending, fully cleared and settled entities.

Debt can be replaced by structured, limited liability equity solutions.

Claims and liabilities can be replaced by 'collective equity insurance'

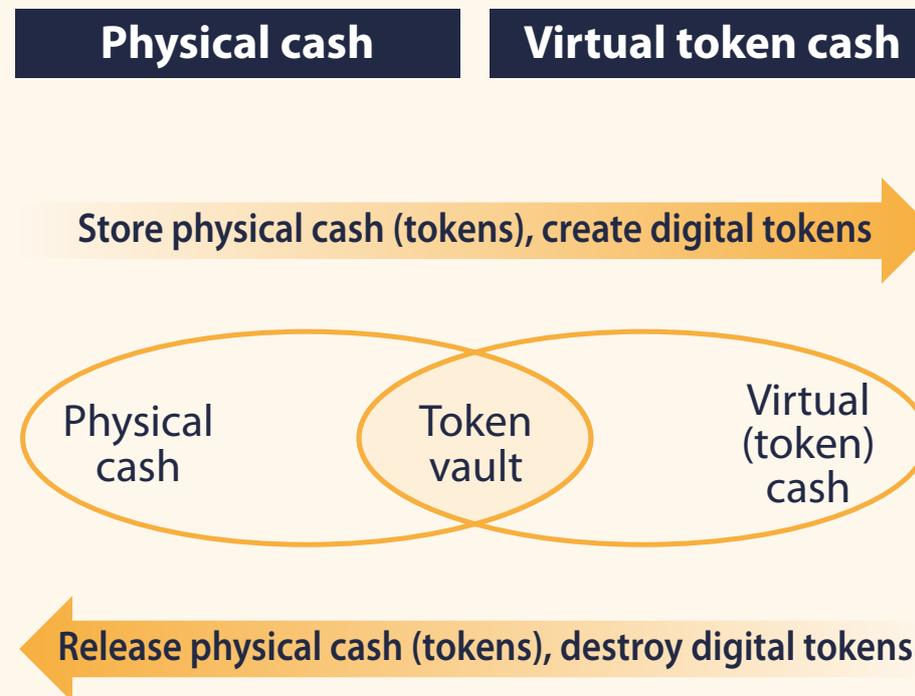
# 7

## Non-dualism: potential system instability money transformation step 1



## 7

# Non-dualism: potential system instability money transformation step 2



# 7

## Non-dualism: potential system instability competing monetary systems for same funding

Left should equal right

<b>Dualistic financial sector</b>		<b>Non-dualistic financial sector</b>
Assets	Liabilities	Only assets
Monetary debt	Monetary wealth	Only monetary wealth: equity investments and real deposit accounts (no interest)

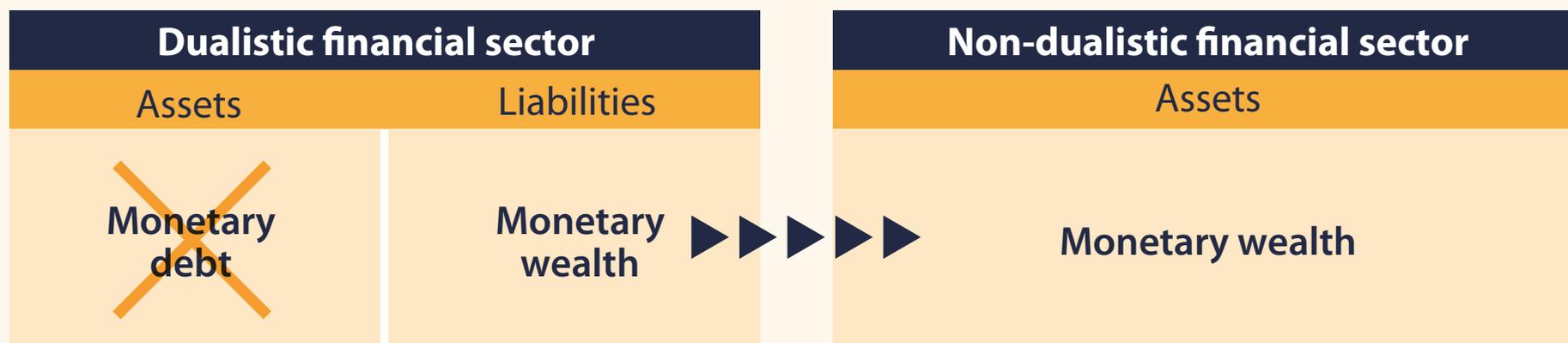


But right may prefer a non-dualistic system instead in case:

- low / negative interest rate
- bank risk
- systemic risk

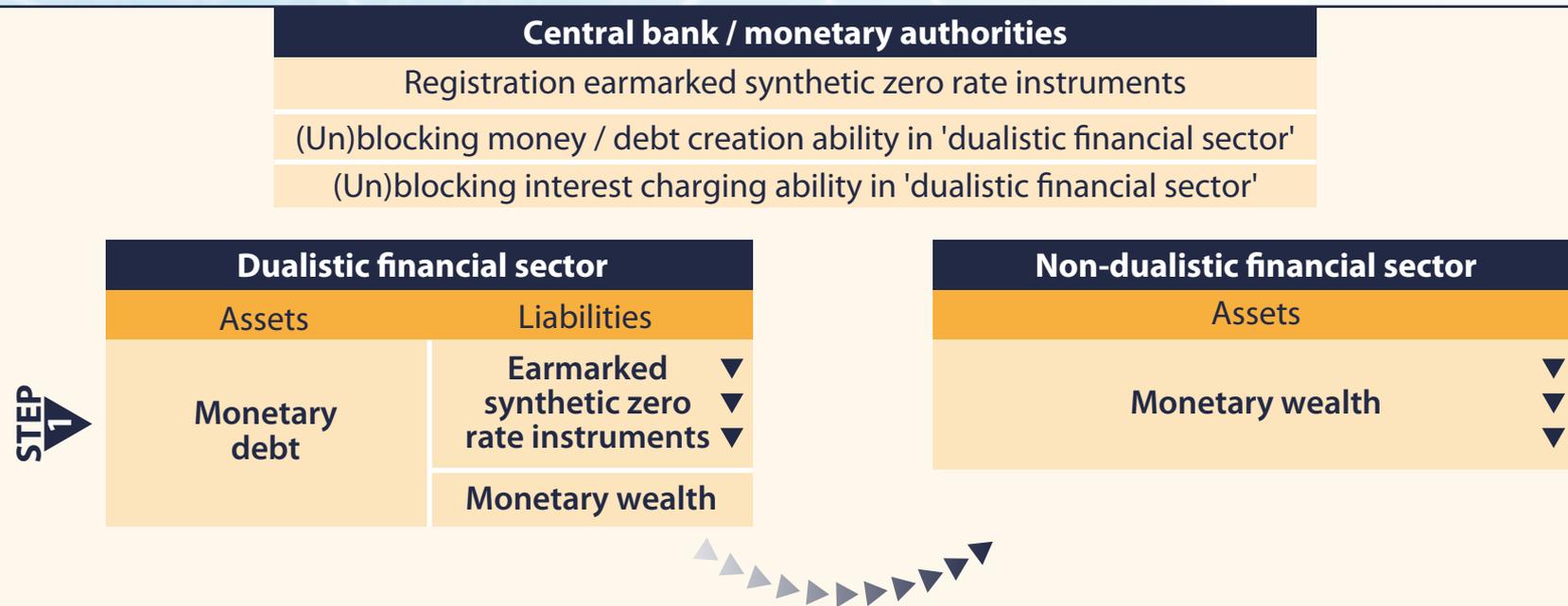
# 8

## Synzeris as a potential non-dualistic policy instrument - I



A potential systemic shift from a dualistic system to a non-dualistic system could facilitate debt destruction without wealth destruction

# 8 Synzeris as a potential non-dualistic policy instrument - II



## Synzeris - Synthetic Zero Rate Instruments

### Temporary synthetic non-dualistic instruments in dualistic systems

- 1 - Unfunded banks issue synzeris for unfunded positions. Central bank registers synzeris.
- 2 - Central bank blocks balance sheet lengthening and interest calculation of synzeris issuing banks.
- 3 - Systems remain liquid and operational while monetary wealth is changing systems

# 8 Synzeris as a potential non-dualistic policy instrument - III

**STEP 2**



Synzeris - Synthetic Zero Rate Instruments  
 Temporary synthetic non-dualistic instruments in dualistic systems  
 4 - Synzeris and monetary debt are nullified

## 9

## The need to work together on this Tokenised money initiatives in DENARS



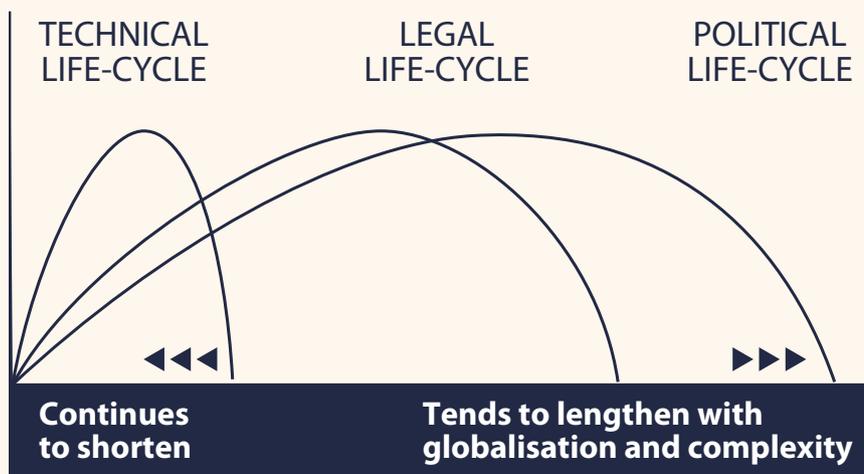
**DENAR**

Ownership based gold and silver in tokens  
and  
Claim based gold and silver collateral in tokens

True full reserve currency in a full reserve monetary  
system without debt and interest rates.  
Single sided balance sheet financial-economic system.  
Tokens kept in DENARS. Full reserve integrity is  
maintained through UETP programmable currency.

# 9

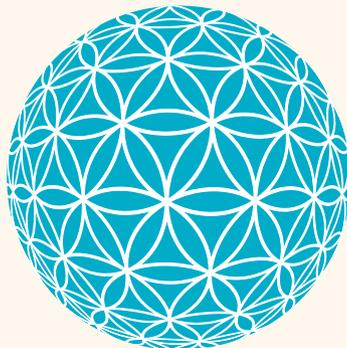
## The need to work together on this We have to innovate together



Regulators and authorities will lose relevance if they do not shift their focus on innovation and experimentation with digital currencies.

Digital currency solution providers, will need to reach out and connect to society to become accepted.

Connected collaboration is the only way to make this work. It is essential to avoid disasters.



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