RETHINKING MONEY TO STABILIZE THE WORLD ECONOMY

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The Real World and the Finance Universe

- Enterprises
- Individuals
- Administrations
- Payment Platforms
- Bookkeeping
- Financial Markets

PRODUCE BUY & SELL
SAVE EXCHANGE

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The Emergence of a Financial Economy

Modern humans first emerged about 100,000 years ago. For the next 99,800 years or so, nothing happened. Almost everyone lived on the modern equivalent of $400 to $600 a year, just above the subsistence level. (Steven Landsburg – University of Rochester)
Money Words

SALARY
From salt paid to roman legionaries

MONEY
From Juno Moneta Temple in Roma

FINANCE
From roman « finis » ie settlement of debt

CREDIT
From roman « credere » ie trust, confidence

AND ...
Obole, solde, soldat, pactole, argent, etc.
Historical Evolution of Economic Infrastructures

- XVIIIth Century: Commercial law
- XIXth Century: Securities law
- XXth Century: Virtual markets
- XXth Century: Minority interest protection

Creditors: -5000, 1100, 1500, 1800, 1900, 2000
Partners: 
Slaves: 
Employees: 

Datation: 1st Phase, 2nd Phase, 3rd Phase, 4th Phase, 5th Phase
M1 Component in France

- 1789: 0% scriptural, 4% fiduciary, 96% metallic
- 1870: 14% scriptural, 17% fiduciary, 69% metallic
- 1950: 56% scriptural, 40% fiduciary, 4% metallic
- 2010: 94.4% scriptural, 0.3% fiduciary, 5.3% metallic

Disconnection between Wealth and Income

French Household Wealth in % of GDP
Meeting Point 1: Real World (of exchanges) Virtual World (of finance)

Exchange of an asset or service against a book balance or a service note

- **Value** (valeur) is not stamping, is instantaneous, is volatile over time.
- **Stamping** (validation) is attached to repayable or transferable money.
- **Price** (prix) is determined by sampling (échantillonnage), is not value.

- How to determine a sampling measurement tool?
- Is an exchange ratio sufficient?
Meeting Point 2: The Value Issue

Values are going to affect in the Financial world:

- Balance sheets ratios and equilibrium of NAV.
- Speed of Flows (Wealth Effect = Consumption – Poverty Effect = Sparing).

Value determination in the Financial world is independent from prices in the world of real exchanges.

BUT THE FINANCIAL WORLD INTERACTS THROUGH:

- Exchanges of Financial instruments allowing vast transfers of monetary means and supposedly better allocation of resources or speculation over time.
- The views of individual Rating agencies and the system as a whole on flows and balances or wealth feeling looking at figures, financials and transferability.

We are in Albert Einstein's or Henry Poincaré's relativity.

THE QUESTION: How do the real world and Financial world interact? How to model the interactions ...

OUR ANSWER: Numbers and not units as long as units are “unified”.

Quantum mechanics applies as well as syncretism.
Meeting Point 3: The Observation of Exchanges in the Financial World

The observer should move within the calendar time space and change lenses to see the exchanges (volume flow and contents)
Money Issuance Process

- Exchanges determine sampling ratios and financial balances.
- Balances determine clearings.
- Not cleared determine balances on BS
- Balances are more or less liquid.

Explicit balances & flows

Implicit balances (not posted) as part of social contract (retirement benefits...)

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The central bank provides liquidities to banks by buying or selling financial instruments.

Specialized agencies regulate limits or favor lending by banks through:
- Accepting financial instruments created by banks.
- Warranting some loans.
- Accepting treasuries.

Intercompany lending.
Direct financing reversing the FLOWS.

Half of the financing (or more done the way round) Arrow to agents should be reversed.
Aggregates Overrun in Europe (in B€ dec 2013)

- **M1 5396**
  - Currency 910
  - Deposits 92
  - Holding against governments 257

- **M2 9207**
  - Overnight deposits 4487
  - Deposits with maturity up to 2 years 1690
  - Deposits redeemable up to 3 months 2221
  - Repurchase agreements 119

- **M3 9831**
  - Money market fund shares 418
  - Debt securities up to 2 years 87

Securitization = Money Creation from Illiquid Assets
Money Issuance from change of value

Asset at Cost

Equity

Debt

Money Issuance (equity increase) without Exchange

Asset at MV

New Equity

Debt

MV = Market Value or Substitutes Authorized by Accounting Standards
The Money Iceberg

- M3 worldwide: 60T$'
- OTC: 700T$'
- US mortgage: 14T$'
- ABS: ?T$'
- CDS: 40T$'

Back to 2008: Money Easing

The Assets Bubble - $290 T
Counter Guarantees - $62 T
Bank Debts - $39 T
Gold - $0.8 T
Coinage and Fiduciary Money - $3.9 T

$1.9T Money Easing Injections
Less than 1% of System
But 2 x Gold Reserves

Source: Various IMF and Paddy Allen for bubble figure.
Trillion US dollars.
Definition of M5 and M6 Aggregates

- **M5** = Any assets with counterparts including bank bills.
- **M6** = Balance sheet total.
- With these aggregates net assets of all the economic agents can be reconciled with P&Ls and linkage between Real World and Financial World made.

**FIGURE 6.2**
European Surveillance Frameworks

Figure 7.4
Reinforcement of net equity: Which harmonization of game rules?
Future frame of European regulation.

International

Financial Stability Board FSB (International)

ESRB (European Systemic Risk Board)

ESFS (European System of Financial Supervision)

ESMA

EIOPA

EBA

ECB (1)

European Parliament

Coordination

Emits alerts and Recommendations

Information on Control

Development of macro preventive approach of financial market stability

Regulator of Nations

Banks

Insurances & Pension Funds

Financial Markets

The EIOPA, a vocation to succeed the CEIOPS

(1) As a result of the Banking Union ECB is now among other things the ultimate supervisor in charge of systemic banks.
The US Macro & Micro Surveillance Set Up

Figure 7.2

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FSB and international standard bodies

FSB members:
- 70 institutions from 24 countries
- 4 international finance institutions
- 6 standard setting bodies
Inside the Monetary Structure

Figure 8.1

B) The Meeting Points

- Exchanges

C) Government, Central Banks and Other Monetary Agencies

Nature of guarantees.
List of instruments schedule.

Purpose of guarantees.
List of markets.
Market participant registration.
Process.

The classification criteria

• Exchanges
Private Commercial Markets
Financial Markets

Regulation of trade, property transfer laws and markets (stamping and sampling).

Regulation of market conditions.
The Money Trap for Non Governmental Economic Agents

Balance Sheets Changes:

- Government Money Issuance
- Exchanges (P&L)
- Changes in Value (MV)
- Reimbursement of Fin Instruments

BS = Balance Sheet
MV = Market Value or substitutes
Guidelines for Quantitative Easing

What is excess money? How to rein excess money?

A) Stable System = Reserves for:
• Adjusting time lags (duration of transport in the former world).
• Adjusting capital needs and time duration of cycles (intergeneration).
• Not foreseeable events.

B) Unstable System = Reserves are excessive compared with need and free of regulation:
• Available for mass effect (speculation).
• Available for battle (price).

The lack of existing financial measure instruments gives limited visibility on quantitative easing impacts despite huge volumes at work (60B€ per month for BCE or 6 months of Greek public debt).

FIGURE 8.4
Present money flows operational outcome

Figure 9.1

- Speed issue of participants clearing
- Level playing field for participants

1. Parties
   - Exchanged objects or services
     - Issuance of Monetary Instruments with Nominal Value
       - Reserve function due to the future exchange right attached expressed in nominal value
       - The accumulation of such rights creates a change in value independent from nominal value if not repayable in better value
       - Dependent on classical offer and demand and operates as currency exchanges
     - Or Direct Clearings between Instruments
       - Books & Records
A Tentative Formula: STD (Serval-Tranié-Douady)

**The Explosion Index** $E$

$$E = (\text{Value} - \text{Price}) \times (S \times M5)$$

$S$: Speed over a period (Revenues/M5) taken as a spread from an optimum target determined later by categories of instruments classification of M5.

**Value**: Nominal value of the instrument.

**Price**: Posted amount if different where the instrument has been acquired or exchanged.

**The Acceleration / Deceleration of Transactions** $S'$

$$S' = k \times (V - P) \times (S)$$

$S$: Response function to price/value discrepancy.

**$K$**: Elasticity coefficient.

The value itself reacts to liquidity, as a function of supply and demand.

$V$ is a fast-varying quality following transactions and market sentiment.

$P$ is only reassessed at each transaction on the particular asset.

Therefore:

$$V' - P' = h \times (S')$$

These two coupled equations create a **joint dynamic** of the **transaction speed** and the **value/price discrepancy**, the **stability** of which can be measured by the **explosion index** $E$. 

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Conclusion

**Financial World**

<table>
<thead>
<tr>
<th>Analyses of:</th>
<th>M5</th>
<th>M6</th>
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<td>M5’ with guarantees</td>
<td>M6’ with guarantees</td>
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**STATIC:**
- Detailed flows
- Detailed positions
- Detailed timing → Speed/Volumes

**DYNAMIC:**
- By class of assets and debts
- By agent, by market, by instrument

New definition of monetary issuance allows analysis of linkage mechanism.

**Real World - What Answers?**

- Reform of the statistical system of monetary surveillance from granular analysis to aggregates
- Monetary Reform
The Rescue of the Monetary System

Massive non-conventional interventions saved the system from collapse in a deflationary environment after the enthusiasm generated by debt bubbles based on new financial technics as securization of assets, revaluation by trading or wrong accounting standards ...

but without appropriate measurement tools as M5 and M6, they don’t allow targeted goals and are the fuel for new crisis ever more dangerous, feeding profound hidden imbalances with the piling up of balances of financial instruments in uncontrolled hands and places (in case of bubbles explosions with/and unexpected slow downs).

Legal means (there is no international law for money but more or less archaic strength competition). A legal set up with regulation (appropriate but not intrusive) is necessary that does not only cover the fields of national sovereignties but also of markets and instruments. Taxpayers (money should no longer be contributing the hedging of unknown instruments and markets or out of the scope of observation of balance sheets).

Even if it is not the book’s thema, let us remember that QE is not a substitute to structural reforms.

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You said Money?
This painting worth a lot?
EXHIBITS

Mr. Jean-François SERVAL – President Constantin Serval & Associés
Shadow Banking: Economics and Policy
(IMF 4 Dec 2012 – FSB 30 Oct 2014)

A. Shadow Banking

Amount: $70 trillion. Europe: 23,50 trillion
US: 25,00 trillion

B. Risk

The notional value of OTC contracts is about $600 trillion, but while much cited, that number overstates the still very sizable risks. A better estimate may be based on adding “in-the-money” (or gross positive value) and “out-of-the-money” (or gross negative value) derivative positions (to obtain total exposures), further reduced by the “netting” of related positions. Once these are taken into account, the resulting exposures are currently about $3 trillion, down from $5 trillion (see table below; see also BIS, 2012, and Singh, 2010).

Another important metric is the under-collateralization of the OTC market. The Bank for International Settlements estimates that the volume of collateral supporting the OTC market is about $1.8 trillion, thus roughly only half of exposures. Assuming a collateral reuse rate between 2.5-3.0, the dedicated collateral is some $600 - $700 billion. Some counterparties (e.g., sovereigns, quasi-sovereigns, large pension funds and insurers, and AAA corporations) are often not required to post collateral. The remaining exposures will have to be collateralized when moved to CCP to avoid creating puts to the safety net. As such, there is likely to an increased demand for collateral worldwide.
The electron, given its wave nature, can be localized around the nucleus of an atom; it is present simultaneously in several places, and this is BEFORE it is observed.

Similarly, radioactive uranium atom can exist in two superposed states: intact and disintegrated. This superposition state ceases immediately as soon as there is observation, and thus interaction of the particle; it is then said than there is decoherence when a system A and B becomes an A or B.

Quantum physics has a doubt: she will tell you that the cat BEFORE observation is alive AND dead at once! Absurd! Why !? The status (alive or dead) of the cat does not depend on the state (of an electron emission or not) of the uranium atom.
Currency Exchange Impact

**No impact** on *market dominant companies* (products or services):

- Only hit by natural market effects
- Usually hedged for balance sheet positions
- Only currency of reference/ price has impact

**Significant impact** on *medium & small enterprises*:

- On exposures
- On markets (e.g. Russia)
- Coverage impossible because of cost (e.g. Ruble)
- Time lag for price adjustment may occur because of inventories

Currency Exchange Risk for Counterparties

Currency exchange volatility is **destructive**:  

- For exposed positions (non hedged contracts and liquidities).  
- For operations (sales – purchases).  
- Narrow margin.  
- Long term investments forecasts become difficult if not impossible – freeze decisions.  
- Risk of fractioning between monetary zones because of volatility.  
- Economies of scale destruction (optimum zones fractioning).
Optimum Monetary Area « OMA »

**Liberty Criteria**

- Capital Mobility
- Goods & Services
- Free Settlement

**Barriers**

- Financial Instruments
- Law & Regulations, Tariffs
- Culture (language)

**Goals of OMA:**
- Scale economies.
- Competition between resources: HR / Products.

**Issues:**
- Excessive social tensions due to exclusion.
- Or excessive speed of transformation.

Contradictory Policies

- **Size** → Scale economies
  - Make market access more difficult, reducing competition

- **Combination** → of size and law (evolution over time)
  - Size adaptation
  - Stability regulation / adaptation

- **Possible conceptual answers** → Admit diversity
  - a) Geographic (mountains vs. plains)
  - b) Social development stage
  - c) Income (GDP) differences (Luxembourg vs. Bulgaria)

- **Better analyze how to improve competition**
  - a) Multiplication effect of public expenses
Implement Compensatory Mechanism

THE RISK:

Ignorance

The Dangers

Is Greece a problem?

→ Yes, a set up problem for Europe.

• How to make sanctions operational for states failing to meet the budgetary requirements of six-pack and two-pack (not only Greece)?

• Question of social stress due to industry reorganization and increased productivity leading to reduction of employment and change and increase in qualification needs – productivity with optimal dimension of economic space.

• Acceptance of profile differences: Mississipi compared with Michigan.

The answer: Education. European national feelings.

The only risk from the Greek crisis is contagion. This danger has been contained with time passing and freezing of balances.
Facts about Greece

- GDP (2013): 242 billion € (or 283$), PPI base.
  - 80% services / 16% industry
- GDP per inhabitant: 22,083 €
- 11 million inhabitants.

- Euro zone
  - Decision May 1979
  - Effective 01/01/2001

- Global debt: 425,190 million €
- Debt per inhabitant: 38,435 €
- Debt = 175% of GDP

Budget spending
- Governmental spending: 9,629,000 €
- Balance: -1.827 billion €
- Spending to GDP: 59.20 %
Balance / Regulation – Supervision

A. The financial system is now global. Benefits from economies of scales – 25% of banks’ P&Ls are computer and telecommunication costs. Very important to keep this in mind: this is an incentive for single regulation allowing single processes and more many participant.

B. Resulting diversity of users, instruments and financial markets.

→ Capital Markets Union « CMU ».

(Comments on targets and hearings by European Commissioners in charge expected by June 2015).

Financial stability services and CMU – 35 billion per year efficiency gains.
Bitcoin
A Great Decentralized World with a Common Issuance System

- No stability of value
- No guarantee of origin
- No guarantee of exchangeability
- Current legal system for sanctioning is by jurisdiction = territorial
- Bitcoin is transnational – no transnational law to address frauds
- No attachment to owner and weak traceability
- A good tool for fraudulent activities
SME’s Questions

• Exchange rate issue:
  • Doesn’t exist with everyone.
  • Exists through raw material prices and dollar value – with various intensities for everyone.

• Greek debt and Greek default are not an issue.

• Governmental debt issue:
  • Yes – Consequent interferences.
  Tax policies to postpone.
  Due date – and withdraw from economy.

• The whole question of governmental spending multiplier for individuals and for independant SME’s.
THANK YOU!

“The Monetary System: Analysis and New Approaches to Regulation” is available on www.amazon.com

For more information on the presentation’s topics, you can go to our blog: http://themonetarysystem.co

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