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## Structural Imbalances and Financial Crises Proliferation

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### *Summary*

This article deals with fundamental concepts that are the prime cause of financial crises proliferation such as fractional reserve banking system, overleveraging and structural imbalances created in such a fashion. It examines these issues in a completely new manner shedding the light on their alternative interpretation which contrasts conventional wisdom. Unchecked money supply is characterized as the main problem that causes overleveraging, which in turn reinforces property bubbles. The pattern of economic growth that is heavily dependant on rising debt is completely unsustainable. Inflation and increased taxes in order to serve public debt obligations under the privately-owned fractional reserve banking system are not only its by-products but also its vital components. The very logic of the compound interest problem causes spiraling debt, which cannot be supported by constant economic growth that is limited against the finite nature of Earth's natural resources. Pending reform of the present monetary system is key to the solution of most contentious issues in the global economy.

*Keywords:* structural imbalances, fractional reserve banking system, financial leverage, financial sector, financial crises, sustainable economic growth

### **Introduction**

It is almost proverbial to state that financial services “make the world go around”. Indeed, they are fundamental to the operation of all production circuits and networks because every economic activity has to be financed at all stages of its production. Financial institutions have the role of producing credit money and credit system to smooth the payments of debt. This is what we often refer to as financial intermediation, whereby financial resources are pooled among those with surplus

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funds to be lent out to those who choose to be in deficit, that is to borrow. Financial markets along with services associated to them have become increasingly complex and far less predictable (Dicken, 2007: 383-386). With rising complexity on the one hand and the globalization process on the other, financial markets have been invariably engulfed in a series of financial crises in the last three decades. The current credit crunch crisis, which initially unfolded in the American real estate sector, could be compared to a heart attack posing a great challenge to the global economy. It is, therefore, legitimate to start an inquiry into the fundamental and underlying causes of recurrent financial crises. Why is it really that way? And finally, is there any hidden process such as the fractional reserve banking system, the logic of which sets the stage for these phenomena?

### **Fractional Reserve Banking System and Its Influence upon Financial Markets' Development**

The general context for the onset of the latest sub-prime financial crisis, as well as for almost every preceding one in the last three decades, has been set by five important trends at the top of a more subtle mechanism in the monetary system itself. These trends are as follows:

1. **Market saturation** implies that from the late 1970s traditional financial services markets were reaching saturation. Fewer clients often meant that, for new clients to be added to the list, commercial banks should have issued credit to parties with questionable credit worthiness.

2. **Financial disintermediation** was becoming quite popular, especially among corporate borrowers with the intention of circumventing financial intermediaries, particularly the banks.

3. **Deregulation of financial markets** was labelled as a new mantra which promotes economic growth and better risk-management in contrast to the financial markets that had been regulated by national governments. New financial products, changes in the way in which prices of financial services are set and opening up of new geographical markets were the key words.

4. **Internationalization of financial markets** is based upon the massive growth in international trade, the global spread of transnational corporations and the vastly increased institutionalization of savings.

5. **Technological innovation** made information processing more efficient, since information is both the "raw material" and the product of financial services. Computers made money electronic and not only transformed the physical form in which money served as a medium of exchange, but they were also in the process of transforming the systems by which payments of money were exchanged and recorded (Dicken, 2007: 383-386).

Table 1: The sequence of development of the banking system

The stages of banking development	Banks and space	Credit and space
<p><i>Stage 1: Pure financial intermediation</i></p> <p>Banks lend out savings Payment in commodity money No bank multiplier Saving precedes investment</p>	<p>Serving local communities, wealth based, providing foundation for future financial centres</p>	<p>Intermediation only</p>
<p><i>Stage 2: Bank deposits used as money</i></p> <p>Convenient to use paper money as means of payment Reduced drain on bank reserves Multiplier process possible Bank credit creation with fractional reserves Investments can now precede savings</p>	<p>Market dependent on extent of confidence held in banker</p>	<p>Credit creation focused on local community because total credit constrained by redeposit ratio</p>
<p><i>Stage 3: Inter-bank lending</i></p> <p>Credit creation still constrained by reserves Risk of reserves lost offset by development of inter-bank lending Multiplier process works more quickly Multiplier larger because banks can hold lower reserves</p>	<p>Banking system develops at national level</p>	<p>Redeposit constraint relaxed somewhat, so one can lend wider afield</p>
<p><i>Stage 4: Lender of last resort facility</i></p> <p>Central bank perceives need to promote confidence in banking system Lender-of-last resort facility provided if inter-bank lending inadequate Reserves now respond to demand Credit creation freed from reserves constraint</p>	<p>Central bank oversees national system, but limited power to constrain credit</p>	<p>Banks freer to respond to credit demand as reserves constraint not binding, and they can determine volume and distribution of credit within national economy</p>

<p><i>Stage 5: Liability management</i>          Competition from non-bank financial intermediaries drives struggle for market share          Banks actively supply credit and seek deposits          Credit expansion diverges from real economic activity</p>	<p>Banks compete at national level with non-bank financial institutions</p>	<p>Credit creation determined by struggle over market share and opportunities in speculative markets          Total credit uncontrolled</p>
<p><i>Stage 6: Securitization</i>          Capital adequacy ratios introduced to curtail credit          Banks have an increasing proportion of bad loans because of over-lending in stage 5          Securitization of bank assets          Increase in off-balance-sheet activity          Drive to liquidity</p>	<p>Deregulation opens up international competition, eventually causing concentration in financial centres</p>	<p>Shift to liquidity by putting emphasis on services rather than credit; credit decisions concentrated in financial centres; total credit determined by availability of capital, i.e. by central capital markets</p>

*Source:* based on Dow, 1999: Tables 1 and 2 (Dicken, 2007)

The nexus of these trends is a new and extremely competitive environment which is underpinned by the inherently self-destructive money creation process. It can be described as a Ponzi scheme that has reached its mathematical limits, and it will be described in further sections.<sup>1</sup> “Fractional reserve” lending, which allows banks to create “credit” (or “debt”) with accounting entries, represents an unstable house of cards. As the sequence of development of the banking system shows (Table 1), the banks in the fourth stage can create credit completely freed from reserves constraint. Having in mind a brief history of money with commodity money at the outset, followed by receipt, fractional and fiat money, it can be concluded that each step involved diminution of the real commodity backing the currency. Receipt money was often turned into fractional money by bankers. Some of them found out that they could temporarily loan out additional pseudo-certificates exceeding

<sup>1</sup> A Ponzi scheme is a form of pyramid scheme in which new investors must continually be sucked in at the bottom to support investors at the top. The system is destined to collapse because the earnings, if any, are less than the payments. Usually, the scheme is interrupted by legal authorities before it collapses because a Ponzi scheme is suspected or because the promoter is selling unregistered securities. As more investors become involved, the likelihood of the scheme coming to the attention of authorities increases. In most recent “Ponzi” schemes, the U.S. government has alleged that Bernard Madoff’s firm was a Ponzi scheme that took an estimated \$50 billion of investors’ money.

their collective inventory of gold and collect interest on these loans (Nuri, 2002). Rothbard notes that this practice was ruled legal by courts in some historical cases (Rothbard, 1990).

Money expansion can be divided into publicly-owned money expansion and privately-owned money expansion. In the latter form of expansion private banks transform receipt money into fractional money, and the practice is regarded as legal by the government (Griffin, 2006). Revenue is counted as “profit” by private bankers. Publicly-owned money expansion means that the government with the knowledge of its citizens debases the currency as a matter of policy for a revenue stream rather than taxation. This expansion ensues either via centralized banking or non-centralized banking, where different banks issue their own “banknotes” in contrast to the universal and standardized currency. If the government lacks funds for financing its consumption, taxation is a viable option. But if taxation doesn’t provide the government with necessary funds, the government can issue bonds. In the case of straight borrowing, a government borrows money via issuing bonds at a discount on face value, promising to repay the purchaser the face value at some specified date in the future. Expansion borrowing represents a contrast in that it provides a government with funds, at the same time creating additional money to the existing supply. The issuer of the currency in case of expansion borrowing receives seignorage.<sup>2</sup> If a bank buying bonds has assets on deposit equivalent to the borrowed funds, it’s “straightforward borrowing”. Another case involves only a fraction of the loan backed by assets. The fraction of deposits-to-loans a bank is required to hold is called the reserve requirement. Commodity and receipt money are related to straight borrowing, and fractional or fiat money to expansion borrowing. They can in turn be practiced either by a central bank or by a non-central bank (Nuri, 2002: 4-6). The current banking system in the USA is subdued to a central-bank, which is privately-owned and creates money via the expansion borrowing process.

This is reflected in the statements that were made during the hearings of the House Committee on Banking and Currency, September 30, 1941:

Congressman Patman: “How did you get money to buy those two billion dollars worth of Government securities back in 1933?”

<sup>2</sup> Seignorage is usually defined as the difference between the nominal value of money and its cost of production. The difference is a sort of “profit” for the issuer of money. In Medieval Europe this source of revenue was often very important for ruling authorities. They could earn it either openly by adding a “seignorage charge” above a normal mint charge that offset the cost of minting when producing a metallic coin, or more secretly by debasing their coin through a reduction of its weight and “fineness” (by increasing the proportion of non-precious alloy). If the surreptitious strategy were to be detected by the public, its effectiveness would be undermined, as people would either not accept the coins or accept them only at a discount (Ravenhill, 2007: 230).

Governor Eccles: “Out of the right to issue credit money!”

Patman: “And there is nothing behind it, is there, except our Government’s credit?”

Eccles: “That is what our money system is. If there were no debts in our money system, there wouldn’t be any money.” (Griffin, 2006: 218)

### **Econophysics Approach to the Modern Banking System and Its Consequences: Inflation and Debt**

So, what are the ultimate consequences of such an outrightly flawed model and how could we describe it in scientific terms? The solution to this challenge comes in the form of an interesting analogy of the ideal gas law from thermodynamics theory to the basic equation of money demand. Another important analogy is derived from observing money system as an energy system. One must start with a basic equation for money demand outlined by Irving Fisher:

$$MV=PY$$

- M = stock of money
- V = velocity of money
- P = price level
- Y = level of real output in the economy, e.g. the GDP

At the same time the ideal gas law for gases at low density purports the following:

$$pv = nRT$$

- p = pressure measured in dimensional units of force/length<sup>2</sup> (*i.e.* force/area),
- v = volume measured in length<sup>3</sup>
- T = temperature
- R = conversion constant
- n = the number of particles (atoms or molecules)

A striking correspondence can be matched when the “money demand” equation is put in the following form:

$$1/P \cdot MV = Y$$

Analogies are as follows:

$$1/P = p$$

$$MV = v$$

$$Y = T$$

So, a parallel can be drawn between mass economy and a given volume of gas under pressure. When the volume is increased, the pressure per area decreases under the assumption of constant temperature. The same applies to mass economy. If the money stock is increased, prices increase as well (because they are inversely proportional to the pressure) assuming a constant GDP. Prices therefore serve as a measure of money-energy when denominated in units of current pressure, often referred to as “underlying value” vs. “nominal value”. Boyle’s law remarks that under constant temperature (constant GDP), money-energy is conserved due to changes in the money stock. An important assumption is that internal energy of an ideal gas is a function of temperature only:

$$u = f(T)$$

$$p_1 v_1 = p_2 v_2$$

In case the money stock is increased by an amount  $v_2 = v_1 + x$ , then  $p_1 v_1 = p_2 (v_1 + x)$ ; (constant GDP assumed):

$$p_2 = (v_1/v_1 + x) p_1$$

The new “pressure per dollar” is a fraction of the previous one, so a greater volume of dollars is required to get the same level of money-energy, which explains inflation (Figure 1 on the next page). It is noteworthy to pose a question: what are the consequences of this inflation? Just like the issuance of additional shares by the company’s founders dilutes the share price (“secondary offering”) and causes damage to public shareholders, new money supply means that owners of the private central bank create new money which decreases the money-energy of all other money holders. In effect, a privately-owned central bank owns a larger share of the economy after the money expansion process, while all other economy shareholders lose real value in their assets (Nuri, 2002: 7-9). Inflation is often underestimated by the Consumer Price Index (CPI) because it mostly tracks a set of inelastic goods which are not too sensitive to the increase in price. Other major flaws include lack of focus on technological change and neglect to the quality of goods and services rendered (Samuelson, 2000). It is often misunderstood that inflation comes into existence as an external phenomenon much like the weather, whereas it is mostly caused by expansionary monetary policy. The following statement reveals the real proportion of the problem, often termed as “Solow-Paradox”: “you can see the computer age everywhere these days except in the productivity statistics” (Solow, 2000).

Almost all underlying problems of the mass economy must be attributed to the monetary system and the way it operates. Money’s purpose is to represent scarcity. If scarcity-units (money) are allocated indifferent of production of goods and services in the real economy, scarcity-units are debased. A fair and sound money sys-

tem is at the core of preventing serious financial and economic crises. This kind of monetary system requires scarcity-integrity. A fair money system refers to a fractionally-based system which is publicly-owned, where there is legislative control over  $r$ . To the fully-backed money system ownership is completely irrelevant.

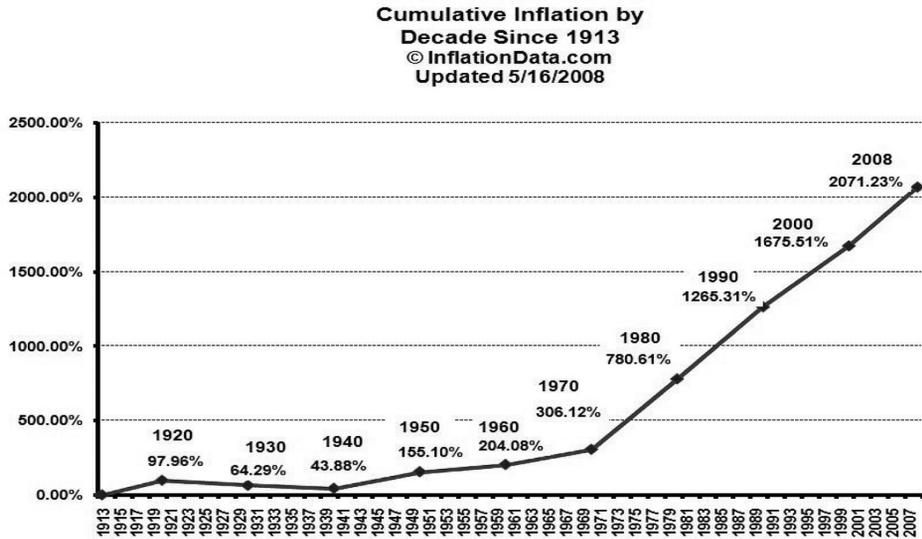


Figure 1. Cumulative inflation since the enactment of the Federal Reserve Act until 2007. The loss of the US dollar purchasing power is shattering.  
Source: inflationdata.com

Fiat currency is inherently unsound in that it often ends up in unchecked money expansion, but it doesn't mean that it will inevitably lead to a loss of value and the collapse of the whole system. Collapse is caused as  $r$  tends to 0 under the presumption of a negligent and corrupt administration. It can be concluded that the privately-owned fractional reserve money system is not a fair one, because it implies and facilitates private confiscation of public property. General public is impoverished both by taxation and higher inflation, which means that the "pressure per dollar" has decreased significantly (Nuri, 2002: 20-22).

The second malignant consequence of such a monetary system refers to the explosion of public debt. A constantly rising public debt is an ever bigger burden to taxpayers. This is detrimental to the quantity and quality of public goods' provi-

sion. Here we come to the doctrine of Keynesianism, which is actually dependant on public indebtedness. A careful distinction between the “real GDP” and the “natural level” of the GDP means that this occurs as a result of price and wage stickiness, unemployment and savings level. Artificial stimulation seems therefore to be a convenient solution to increase GDP (Nuri, 2002: 40). Another problem with this doctrine and the system of money creation attached to it is that banks create the principal but not the interest necessary to pay back their loans; and that is where the Ponzi scheme lies. Since loans from the Federal Reserve or commercial banks are the *only* source of new money in the economy, additional borrowers must continually be found to take out new loans to expand the money supply, in order to pay the interest collected by the bankers. New sources of debt are fanned into “bubbles”, which expand until they burst and new bubbles are devised thereafter, until no more borrowers can be found and the pyramid finally collapses (Brown, 2007b). This can be easily observed in the rising indebtedness of developing and developed countries as well. In 2003, the total foreign debt of developing countries amounted to 2530 trillion \$. Developed countries were also heavily indebted: the sum of their total public debt skyrocketed to unprecedented heights of 35 000 trillion \$ (USA, United Kingdom, Germany and France as largest debtors) (Ravlić, 2006: 105). The gap between stagnant or even declining real wages and fast increasing consumer expenditure was closed by the rising consumer debt. Today, U.S. households spend more of their disposable income to pay off debts (14%) than to buy food (13%) (Gokay Bulent, 2009). In the U.S., household indebtedness rose from 50% of GDP in 1980 to 100% in 2007. The financial sector indebtedness was 21% of the GDP in 1980, 83% in 2000, and 116% by 2007 (*ibid.*). The total American debt, which is the debt of private households, private business, and government, has doubled as a proportion of GDP since 1980, and was 350% of GDP even before the recent dramatic takeover of new debt by the government (Tabb, 2008). “Today’s total U.S. credit relative to GDP has surpassed significantly the levels preceding the Great Depression. Back then, the total amount of credit in the financial system almost reached an astonishing 250% of GDP. Using the same metric today, the debt level in the U.S. financial system surpassed already mentioned 350% in 2008, while the level in 1982 was ‘only’ 130%. As Charles Dumas from Lombard Street Research put it quite aptly, ‘we’ve had a 30-year leveraging up of America, ending in an unchecked orgy’.”<sup>3</sup>

<sup>3</sup> <http://www.globalresearch.ca/index.php?context=va&aid=12121>.

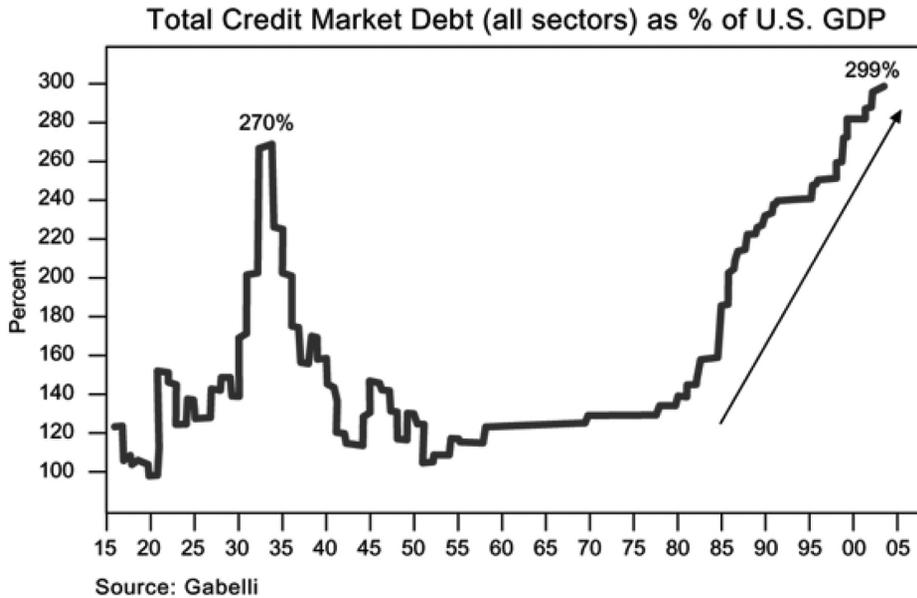


Figure 2. Total credit market debt shows a rising spiral of total debt because of the compound interest problem and the inability of debtors to pay off their debts without taking on new loans. The problem was especially precipitated in the 1980s and has persisted until today. Source: <http://www.globalresearch.ca/index.php?context=va&aid=12121>

### Monetary Aggregates – Are the Data Somehow Manipulated?

It is worth mentioning that central banks still hold substantial reserves of gold and foreign currency as a buffer against financial turbulence. The size of these gold reserves (just 845 bn \$ in central banks' vaults) reminds us of how much fiat money depends on a confidence trick.<sup>4</sup> The narrowest measure, M1, is restricted to the most liquid forms of money. It consists of currency in the hands of the public; travelers checks; demand deposits, and other deposits against which checks can be written. M2 includes M1, plus savings accounts, time deposits of under \$100,000, and balances in retail money market mutual funds. "In April 2008, M1 was approximately \$1.4 trillion, more than half of which consisted of currency. While as much as two-thirds of U.S. currency in circulation may be held outside the United States, all cur-

<sup>4</sup> <http://www.guardian.co.uk/business/dan-roberts-on-business-blog/interactive/2009/jan/29/financial-pyramid>.

rency held by the public is included in the money supply because it can be spent on goods and services in the U.S. economy. Global M1 was around \$3.9 bn in October 2008. M2 was approximately \$7.7 trillion and largely consisted of savings deposits. The Federal Reserve began reporting monthly data on the level of currency in circulation, demand deposits, and time deposits in the 1940s, and it introduced the aggregates M1, M2, and M3 in 1971. The Full Employment and Balanced Growth Act of 1978, known as the Humphrey-Hawkins Act, required the Fed to set one-year target ranges for money supply growth twice a year and to report the targets to Congress.<sup>5</sup> During the heyday of the monetary aggregates, in the early 1980s, analysts focused a lot on the Fed's weekly money supply reports, and especially on the reports on M1. If, for example, the Fed came out with a higher-than-expected M1 figure, the markets surmised that the Fed would soon try to cut money supply growth to bring it back to its target, possibly increasing short-term interest rates. "In 1981, NOW accounts were introduced nationally so the relationship between M1 growth and measures of economic activity, such as Gross Domestic Product, broke down. Depositors moved funds from savings accounts – which had been included in M2 but not in M1 – into NOW accounts, which were now part of M1. As a result, M1 growth exceeded the Fed's target range in 1982, even though the economy experienced its worst recession in decades. The Fed de-emphasized M1 as a guide for monetary policy in late 1982, and it stopped announcing growth ranges for M1 in 1987. By the early 1990s, the relationship between M2 growth and the performance of the economy also had weakened. Interest rates were at the lowest levels in more than three decades, prompting some savers to move funds out of the savings and time deposits that are part of M2 into stock and bond mutual funds, which are not included in any of the money supply measures."<sup>6</sup> Chairman Greenspan added: "The historical relationships between money and income, and between money and the price level have largely broken down, depriving the aggregates of much of their usefulness as guides to policy. At least for the time being, M2 has been downgraded as a reliable indicator of financial conditions in the economy, and no single variable has yet been identified to take its place."<sup>7</sup> "M3 included all of M2 (which includes M1) plus large-denomination (\$100,000 or more) time deposits, balances in institutional money funds, repurchase liabilities issued by depository institutions, and Eurodollars held by U.S. residents at foreign branches of U.S. banks and at all banks in the United Kingdom and Canada."<sup>8</sup> "In March 2006, the Federal Reserve Board of Governors ceased publication of the M3 monetary aggregate. M3 did not appear

<sup>5</sup> <http://www.ny.frb.org/aboutthefed/fedpoint/fed49.html>.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

<sup>8</sup> [http://inflationdata.com/Inflation/Inflation\\_Articles/M3\\_money\\_supply.asp](http://inflationdata.com/Inflation/Inflation_Articles/M3_money_supply.asp).

to convey any additional information about economic activity that was not already embodied in M2.”<sup>9</sup> It is obvious therefore that the data on inflation and monetary aggregates are unreliable and somehow manipulated.

**Annual U.S. Money Supply Growth - SGS M-3 Continuation**  
**Monthly Average through December 2008 (ShadowStats.com, FRB)**

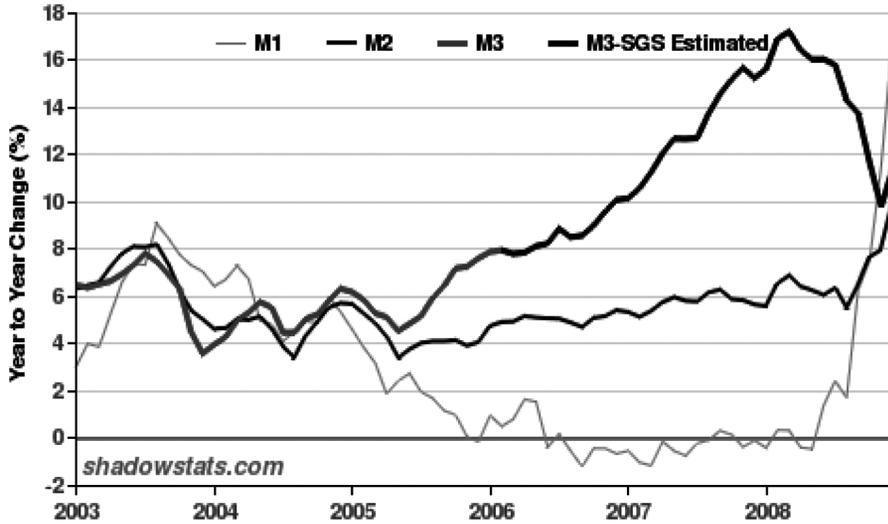


Figure 3. Tracking monetary aggregates.

Source: shadowstats.com

### Financial Leverage and “Bubble Burst”

Reflecting on the process of loosening reserve constraints depicted in Table 1, one must ask whether this process generates financial crises via gearing or financial leverage. It must be noted that the presumption of ever expanding money supply via new credit creation, decoupled from real economic values creation, gives rise to gearing. Financial leverage or gearing means that borrowing money is possible in order to supplement existing funds for investment in such a way that the potential positive or negative outcome is magnified and/or enhanced. If the firm’s rate of return on assets (ROA) is higher than the rate of interest on the loan, then its return on equity (ROE) will be higher than if it did not borrow because  $assets = equity + debt$ . On the other hand, if the firm’s ROA is lower than the interest rate, then its ROE

<sup>9</sup> <http://www.ny.frb.org/aboutthefed/fedpoint/fed49.html>.

will be lower than if it did not borrow. Leverage allows greater potential returns to the investor than otherwise would have been available but the potential for loss is also greater, because if the investment becomes worthless, the loan principal and all accrued interest on the loan still need to be repaid.

There are economic periods when optimism incites a widespread and excessive use of leverage, which is called overleverage. One of its forms, associated to the subprime crisis, was the practice of financing homes with no or little down payment, playing on the hope that the price of the assets will rise. It was anticipated that if people could not keep up with their mortgage payments, their houses could be repossessed and sold at a profit. But house prices were rising due to reckless lending which in turn generated demand. In the United States, for example, owner-occupied home prices increased annually by an average of about 9 percent. The market value of the stock of owner-occupied homes in the U.S. rose from slightly less than \$8 trillion in 1995 to slightly more than \$18 trillion in 2005. It has been contracting ever since, confirming the working of the 18-year Kuznets real estate cycle, which has gone from the top of 1987 to the 2005 top.<sup>10</sup> Another form involved the five largest U.S. investment banks, which invested heavily in mortgage-backed securities, increasing their leverage between 2003-2007. Thus banks were allowed to lend from 10 to 30 times their capital base, essentially counterfeiting money they lend.<sup>11</sup> Mortgage lenders such as commercial banks did not usually lend the money out of their own pockets. The investment banks that had been willing to lend money to mortgage lenders found out only after a sharp decline in house prices that they were facing losses of tens of billions of dollars. Not even the securitization revolution made powerful financial institutions immune to the shattering consequences of the financial turmoil.<sup>12</sup>

The fractional reserve banking system allowed banks to lend many times the amount they take in as deposits. "As commercial banks found ever more sophisti-

<sup>10</sup> <http://www.globalresearch.ca/index.php?context=va&aid=7333>.

<sup>11</sup> <http://www.globalresearch.ca/index.php?context=va&aid=10589>.

<sup>12</sup> The process through which an issuer creates a financial instrument by combining other financial assets and then marketing different tiers of the repackaged instruments to investors. The process can encompass any type of financial asset and promotes liquidity in the marketplace. Mortgage-backed securities are a perfect example of securitization. By combining mortgages into one large pool, the issuer can divide the large pool into smaller pieces based on each individual mortgage's inherent risk of default, and then sell those smaller pieces to investors. The process creates liquidity by enabling smaller investors to purchase shares in a larger asset pool. Using the mortgage-backed security example, individual retail investors are able to purchase portions of a mortgage as a type of bond. Without the securitization of mortgages, retail investors may not be able to afford to buy into a large pool of mortgages (<http://www.investopedia.com/terms/s/securitization.asp>).

cated ways to borrow and interest rates were kept at a historically low level, this process saw assets (or loans due to be paid back) of the world's biggest commercial banks balloon to 39 \$ trillion according to the Bank for International Settlements. Easy money fuelled a series of gigantic bubbles in the price of key assets such as property. Working out how much the world is worth is tricky, but The Economist made a stab at 115 trillion \$ for developed economies in 2002 – including property, shares, bonds. In the subsequent boom, shares alone soared to a peak of 51 trillion \$. Applying the same multiplication to other asset bubbles suggests that the total asset value of developed economies peaked at 290 trillion \$, compared with the global GDP of around 55 trillion.”<sup>13</sup> Finally, it can be remarked that unchecked money supply increases the risk of financial leverage misuse, as a consequence of which bubbles originate and burst.

### Leverage Ratios For Major Investment Banks

The leverage ratio is a measure of the risk taken by a firm; a higher ratio indicates more risk. It is calculated as total debt divided by stockholders equity. Each firm's ratio increased between 2003-2007.

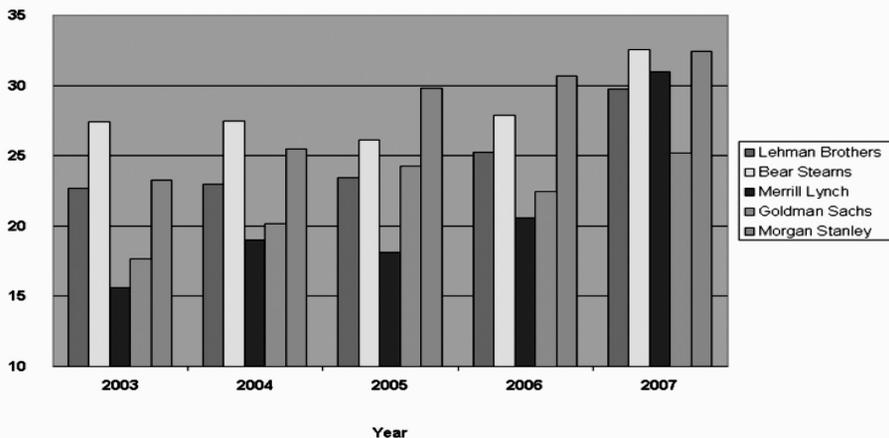


Figure 4. Leverage ratios for major investment banks. It can be seen that all five major investment banks increased their risk exposure since 2003.

Source: Company Annual Reports

<sup>13</sup> <http://www.guardian.co.uk/business/dan-roberts-on-business-blog/interactive/2009/jan/29/financial-pyramid>.

## Unsustainable Pattern of Everlasting Economic Growth

The final and perhaps greatest vulnerability of the world system is that of availability and distribution of critical resources such as fossile fuels, food and water. The sheer logic of economic accumulation under the current economic system necessitates that the material elements of nature are transformed into commodities at an ever-expanding rate. Unrestrained accumulation represents a cycle of never-ending expansion. This means that more and more materials from the nature must be consumed in the process of production. So far, the world's most valuable energy supplies and minerals are being extracted and consumed at a breakneck pace (Gokay, 2009). Unrestrained accumulation has its roots in the basic principles of the monetary system. Until 2006, when FED stopped publishing data on (M3), over 97 percent of the U.S. money supply was created as electronic money (Federal Reserve Bank of New York, 2008; United States Mint, 2004; Brown, 2007a). The monetary system that creates electronic money out of "thin air" in the absence of independent audit makes the monetary system unsustainable and prone to corruption. Constantly increasing debt is at the heart of the problem. For instance, a dollar lent at 5 percent interest becomes 2 dollars in 14 years. That means the money supply has to double every 14 years just to cover the interest owed on the money existing at the beginning of this 14-year cycle. The Federal Reserve's own figures confirm that M3 has doubled or more every 14 years since 1959, when the Fed began reporting it.<sup>14</sup> This is recognized as a spiraling interest problem because the need to find new debtors cannot be quelled. British financial analyst Chris Cook put it simply:

Exponential economic growth required by mathematics of compound interest on a money supply based on money as debt must always run up eventually against the finite nature of Earth's resources. (Cook, 2008)

John Stuart Mill put it this way:

This impossibility of ultimately avoiding the stationary state – this irresistible necessity that the stream of human industry should finally spread itself out into an apparently stagnant sea – must have been, to the political economists of the last two generations, an unpleasing and discouraging prospect; for the tone and tendency of their speculations goes completely to identify all that is economically desirable with the progressive state, and with that alone.

It is scarcely necessary to remark that a stationary condition of capital and population implies no stationary state of human improvement. Even the industrial arts might be as earnestly and as successfully cultivated, with the sole difference that,

<sup>14</sup> <http://research.stlouisfed.org/fred2/data/M3SL.txt>.

instead of serving no purpose but the increase of wealth, industrial improvements would produce their legitimate effect, that of abridging labour.<sup>15</sup>

### **Global Economy Plagued by Financial Crises**

The section above clearly shows that crises are not necessarily generated in the real economy, whose fundamentals ought to be sound under the presumption of sustainable development. Numerous financial crises which originated after the 1973 “oil price shock” can be attributed to this turning point in the second half of the 20<sup>th</sup> century. Rules of the dollar-dominated petroleum market were set after U.S. Secretary of State Henry Kissinger organized U.S.-Saudi Arabian Joint Commission on Economic Cooperation, which officially sanctioned the dollar as the sole means of payment for purchasing oil. After other OPEC member countries accepted the deal, the U.S. government could virtually print dollars in order to pay for oil and the American economy didn’t have to produce goods and services needed to pay for increasing oil imports. OPEC countries used the proceeds to buy necessary goods and services. At the same time, other oil-importing countries had to pay dollars for oil but could not print currency. The only way to do this was to produce goods and services. 1973 represents a very significant year, having in mind a huge amount of petrodollars that has been accumulated in oil producing and exporting states since then. The generated surplus increasingly found its way to investments in financial markets because of higher profit margins. As a result, the value of financial wealth has grown considerably, so that relations between productive capital and financial capital were profoundly modified subordinating all other economic activities. Manufacturing was no longer the primary source of wealth accumulation, and the financial sector’s role transformed from providing capital for manufacturing to buying and selling assets using borrowed funds for profits. All this vast financial sector expansion, overaccumulated financial capital, in other words, “the new centrality of the financial sector”, greatly advanced speculation. This process, widely referred to as *financialization*, is defined as “the increasing role of financial motives, financial markets, financial actors and financial institutions in the operations of domestic and international economies”. For this simple reason there was a low inflation rate in the real economy most of the time having in mind capital streams to generate higher turnovers in financial markets. The financial sector was rising quickly and was three times as big as real economy, which is a completely unsustainable pattern in the long run (Gokay, 2009). From 1973 to 2008 the portion of manufacturing in the GDP of the USA fell from 25% to 12%. The share represented by financial services rose from 12% to 21% (Bloomberg and Schumer, 2007). The power of the financial sector is also reflected in the number of large corporations among

<sup>15</sup> <http://www.panarchy.org/mill/stationary.1848.html>.

2000 biggest ones. Namely, 310 of 2000 biggest corporations were in the financial sector, as measured in 2007. Upon analysis of 100 biggest corporations, it can be concluded that the grip of the financial sector over real economy is even stronger. Out of 100 largest corporations, 51 were rooted in the financial sector.<sup>16</sup> The power of the financial sector manifests itself in international financial flows and currency transactions that have reached unprecedented levels, and they dwarf the value of international trade in manufactured goods and in other services. Only 10 percent of international financial transactions are related to the kind of trade in manufactured goods. Other transactions take the form of speculative dealings – aimed at making short- or long-term profits as ends in themselves.<sup>17</sup> Since the dollar was decoupled from gold in 1973, global economy can be divided into real and symbolic economy, as Peter Drucker put it. Symbolic economy – stocks, derivatives, options – has grown much faster than real economy, and this gap has widened even further. A reverse pyramid is at work and its basis consists of real economy with speculative

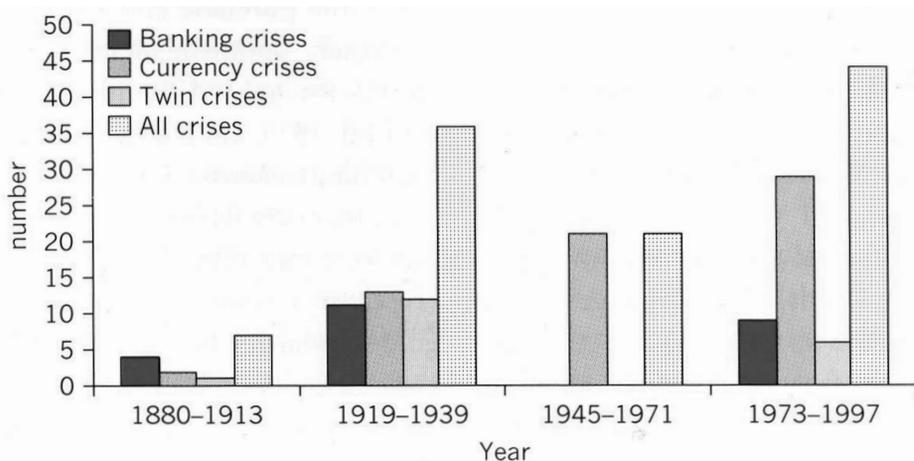


Figure 5. Frequency of financial crises in developed countries. One can conclude that 1919-1939 and 1973-1997 periods were especially plagued by all sorts of financial crises. They were predominantly induced by a large money inflow into financial markets. Prices of financial assets were constantly rising, which was totally unsustainable in the long run. After every bubble burst, a new one was inflated. The type of crises which prevailed in the last three decades were currency crises because of increased capital mobility and financial liberalization.

Source: Data in Bordo and Eichengreen (2002)

<sup>16</sup> <http://www.liderpress.hr/Default.aspx?sid=24935>.

<sup>17</sup> <http://www.liderpress.hr/Default.aspx?sid=58328>.

economy atop of it. Nowadays, symbolic economy determines the outcome of economic activities in real economy.<sup>18</sup>

The aforementioned dichotomy can be seen in the Dow-Gold ratio as the most important ratio between the relative prices of financial assets and real assets. The Dow component represents the valuation of financial assets; the gold component – of real assets. When leverage in the financial system increases significantly, so does this ratio. A very high ratio is interpreted as an imbalance between financial and real assets – financial assets are grossly overvalued, while real assets are grossly undervalued. It also implies that a correction eventually will be necessary – either through deflation, which implies deleveraging and a collapsing stock market, or through inflation, which implies a stagnant stock market for many years and steadily rising prices of real assets, commodities, and gold, usually associated with stagnant economy and typically resulting in stagflation. The global monetary system was on a quasi-gold standard during the 1920s. Back then, dollars and pounds were convertible to gold, while all other currencies were convertible to dollars and pounds. An appropriate way to think about it is that of a precursor to the Bretton Woods from 1945-1971. What is important to understand is that while the system was fiat in nature, gold imposed significant limitations to credit expansion and leveraging.<sup>19</sup>

Somewhat similar was the role of Bretton Woods that lasted from 1945 to 1971. The dollar was tied to gold, while all other fiat currencies were tied to the dollar. Just like in the interwar period, gold imposed some limitations on credit and financial imbalances. Today Bretton Woods II is in the process of disintegration. The world is slowly but steadily losing its confidence in the dollar as the world reserve currency. A flight from the dollar is in progress and the collapse of the global monetary system is imminent. We now live in what has been termed Bretton Woods II. Essentially, this is a pure fiat dollar standard, where all currencies are convertible to dollars, either at fixed or floating exchange rates, while the dollar itself is convertible to “nothing”. Thus, the dollar has no limitations imposed to it by gold, so that, without the discipline of gold, the current global monetary system has accumulated significantly more imbalances than ever before in modern capitalism. These imba-

<sup>18</sup> *Ibid.*

<sup>19</sup> The negative outcome of leveraging can be seen when comparing banks in some West- and East-European countries. French banks were lending one third more than they actually received from their investors, while Irish banks are even more exposed to the deleveraging process. It sounds reckless, but those banks, notorious for lack of regulation in place, were lending two and half times more than they received in from clients. On the other hand, Czech, Slovak and Polish banks fared considerably better because their management decided to lend less than the original sum entrusted by investors, namely 72%, 68% and 83% respectively of the total investors' deposit.

lances show up in the international monetary system as unsustainable trade deficits (and surpluses), skyrocketing official dollar reserves in some European and many Asian central banks, and the proliferation of Sovereign Wealth Funds; more generally, these imbalances result in a myriad of bubbles, overleveraging, and other maladjustments already discussed above.<sup>20</sup>

... a whole new round of disastrous speculation, with all the familiar stages in order – blue-chip boom, then a fad for secondary issues, then an over-the-counter play, then another garbage market in new issues, and finally the inevitable crash. I don't know when it will come, but I can feel it coming, and damn it, I don't know what to do about it. (Bernard J. Lasker, President of the NYSE in 1970)<sup>21</sup>

## Conclusion

The current crisis is a structural issue. It is deeply rooted in the present banking system which ignores scarcity-integrity. The fractional reserve banking system allows unchecked expansion of monetary aggregates and thereby creates a massive debt burden and inflation that only serve interests of the very few. Advanced countries at the core of global economy cannot sustain their economies without resorting to a huge build-up of debt and speculative financial asset investment. This type of investment, regardless of the very nature of assets involved, was causing huge bubbles in the last three decades that burst shortly afterwards. The present crisis is a cumulative result of this unsustainable structural trend. It is a mere interplay between external and internal imbalances in the US and the rest of the world. Countries incurring huge current account deficits are structurally deficient to produce tradable goods and services. There are limits to how far economies can be sustained by debt that is not based on any real economic values created. The current crisis illustrates that it is far from possible to revive consumption and investments only by artificially boosting demand to fill the “output gap”. It also points to the conclusion that constant economic growth is impossible. Only scarcity-integrity deeply rooted at the heart of a transparent and accountable monetary system paired with sustainable development, can contribute to the solution of the most contentious issues facing the global economy.

<sup>20</sup> <http://www.globalresearch.ca/index.php?context=va&aid=12121>.

<sup>21</sup> <http://www.global-investor.com/quote/3459/Bernard%20J.-Lasker>.

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Kristijan Kotarski

STRUKTURNE NERAVNOTEŽE I PROLIFERACIJA  
FINANCIJSKIH KRIZA

*Sažetak*

Ovaj članak bavi se temeljnim konceptima koji se smatraju osnovnim uzrocima proliferacije financijskih kriza kao što su bankarstvo djelomičnih rezervi, pretjerano korištenje financijske poluge te strukturne neravnoteže proizašle iz njih. Pristup problematiki baca novo svjetlo na povezana pitanja te nudi alternativnu interpretaciju zbivanja koje proturječi konvencionalnoj mudrosti. Nekontrolirana ponuda novca okarakterizirana je kao glavni problem koji doprinosi pretjeranom korištenju financijske poluge i pojavi imovinskih mjehura. Obrazac ekonomskog rasta koji znatno ovisi o rastućem dugu s pravom se smatra potpuno neodrživim. Inflacija i povećanje poreznog tereta s ciljem servisiranja javnog duga u okviru privatnog sustava djelomičnih bankovnih rezervi nisu samo njegovi nusprodukti, već i njegove sastavne komponente. Logika složene kamate stvara dužničku spiralu koju ne može podržati konstantan ekonomski rast zbog ograničenosti Zemljinih prirodnih resursa. Predstojeća reforma monetarnog sustava ključna je u nastojanju da se riješe najspornija pitanja globalne ekonomije.

*Ključne riječi:* strukturne neravnoteže, bankarstvo djelomičnih rezervi, financijska poluga, financijski sektor, financijske krize, održivi ekonomski rast

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