

IS THE MARKET ECONOMY ON SURVIVAL TEST AGAIN?

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ABSTRACT

Global economy passes through a time when democratic values and institutions are awfully threatened. This might be a signal for market economy that a crisis is looming for it. That means the democratic values and institutional settings wherein the market economy is housed, if go on deteriorating at current pace, the concept of free economy may come under acid test again very soon. The second reason for which the market economy may face survival test for lack of century long responses to address the problem of business cycles wherein almost in every decade market economy rebirths from ruins by sovereign bailout leaving millions out of work and unfed and subjecting wider income inequalities. Thus, the twin objectives intended to achieve in this paper are: first, going deeper into the assumptions on which the theoretical foundation of market economy is based and check adequacy of its tools, techniques and institutional settings for realizing its claimed efficiencies viz., productive efficiency, allocating efficiency, distributive efficiency, and stabilization efficiency; and second, in case of inadequacies so found the paper is to recommend changes required at the level of assumptions, conceptual framework and institutional settings of market economy so that it can get rid of business cycles and financial crises and run efficiently.

Key words: Efficiency, stability, business cycle, financial crisis, monetary policy

1. INTRODUCTION

Global economy passes through a time of constantly degrading democratic values and threatening its core institutions awfully. Democratic values and institutional settings wherein the market economy is housed, if go on deteriorating at current space, the concept of free economy may come under acid test again, very soon. The core basis of democracy is to agree on and pay confidence to the value of mutual consultation and agreed upon on majority verdict. Strength of the logic wins - is assumed. Institutions built upon that are simply the functional ramifications. As the value of mutual consultation goes on undermined or disregarded, the institutions built upon it for conflict resolution would go on losing strengths leaving lesser and lesser positive space available for effective running of market economy. The second reason for which the market economy may face survival test again for lack of century long responses to address the problem of business cycles wherein almost in every decade market economy rebirths from ruins by sovereign bailout leaving millions out of work, unfed and gulping income inequality. These require digging out root reasons factoring all the longstanding problems just raised.

Moreover, many of the basic assumptions, such as perfect information, economic man's rational behaviors and existence of perfectly competitive market are seen to be overwhelmed by corrupt behavior and more and more unfair means applied in democratic election processes and misuse of power by elected representatives from top to bottom very much rampant all over the world. Particularly, money's underhand power playing boosted by the philosophy of self-interest undermines many of the key assumptions of free economy and put deterrent on its uninterrupted functioning within the so-called democratic institutions.

2. LITERATURE REVIEW

One of the recent comments of the former Bank of England governor Mervyn King having firsthand experience of the global financial crisis 2008 has got widespread attention when published in a report of The Guardian on 20 October 2019. The commentsⁱ are read as:

“The world is sleepwalking towards a fresh economic and financial crisis that will have devastating consequences for the democratic market system. Past crashes spawned new thinking and reform but nothing has changed since 2008 banking meltdown”.

“Following the Great Inflation, the Great Stability and the Great Recession, we have entered the Great Stagnation. King said that in 2013 the former US Treasury secretary Larry Summers had reintroduced the concept of secular stagnation, a permanent period of low growth in which ultra-low interest rates are ineffective: “It is surely now the time to admit that we are experiencing it.”

Mervyn King's comments clearly reminds the famous contention of John Maynard Keynes on the effectiveness of interest rate during depression and the fate of Chicago Plan put forward immediately after the Great Depression of 1929-33; and also the review on it after the global financial crisis 2008 titled as ‘Chicago Plan Revisited’ⁱⁱ in 2012 by Jaromir Benes and Michael Kumhof respectively working at that time in IMF and Bank of England. They undergone a thorough review of the advantages of Chicago Plan claimed by Irving Fisher (1936) as: (1) Much better control of a major source of business cycle fluctuations, sudden increases and contractions of bank credit and of the supply of bank-created money. (2) Complete elimination of bank runs. (3) Dramatic reduction of the (net) public debt. (4) Dramatic reduction of private debt, as money creation no longer requires simultaneous debt creation. In the working paper they finally recommended for separation of the monetary and credit functions of the banking system, by requiring 100% reserve backing for deposits. The finding was based on a comprehensive and carefully calibrated model of the banking system in a DSGE model of the U.S. economy. They found the support for all four of Fisher's claims resulting output gains approaching 10 percent, and steady state inflation drop to zero without posing problems for the conduct of monetary policy.”ⁱⁱⁱ

John Mauldin^{iv} finds that “One of the western civilization’s largest problems is we’ve convinced ourselves debt can be permanent. We don’t use that specific word, of course, but it’s what we do and is why government debt keeps rising. We borrow faster than we repay previous borrowing – and I mean government everywhere, China as well as US.”^v

All these evidences call for fast changes in global economy which mostly functions under market environment. Now the question arises where and how the market economy should undergo changes to avoid its recurrent collapse. The scrutiny may encompass both the house (i.e., democracy) and the inhabitant (i.e., the market economy) live in it.

In a nutshell, global economy is now in an era of Great Stagnation i.e., a period of permanent low growth when investment demand falls extremely at low level bringing down interest rate at ultra-low level. This is a period when role of interest rate as policy tool becomes ineffective. To get out of this situation government borrowing or resort to deficit financing is the usual practice. The practice is known as easy money policy is losing ground now due to its rampant and excessive use increasing public debt-GDP ratio beyond *tipping line* i.e. 77%, causing concern for even the strong economies including U.S.A.

3. METHODOLOGY

The present work relies mostly upon secondary data sources which include referencing of basic theories of economics vis-à-vis subsequent analytical findings of researchers and opinions from economists, top office bearers and practitioners working in renowned global financial and banking institutions. Data published by recognized institutions are of prime use wherever necessary following standard statistical analysis. As a matter of approach both quantitative and qualitative analyses have been resorted to. Philosophical discourses including those based on authentic divine references are of prime importance as data sources dealt herein paying equal importance to both positive (data capturing point of time behavioral change) and normative (eternal value proposition influencing/shaping human character) epistemology.

As an important part of methodology, the basic *hypothesis* taken for proving or disproving throughout this paper is “Human being by nature *selfish plus* approach better serves in managing market economy than “human being by nature *Selfish* proposition”.

Thus, $H_{SPa} > H_{Sa}$

where, H_{SPa} denotes Selfish Plus approach and H_{Sa} denotes Selfish approach.

4. ASSUMPTIONS, CONCEPTUAL FRAMEWORK AND INSTITUTIONAL SETUP OF MARKET ECONOMY

4.1 Assumptions

Self-interest has been placed in the core of interpreting market economy. It refers to actions that elicit personal benefit. Adam Smith, the father of modern economics, explains that the best economic benefit for all can usually be accomplished when individuals act in their self-interest. His explanation of the Invisible Hand reveals that when dozens or even thousands act in their own self-interest, goods and services are created that benefit consumers and producers. Moreover, Smith and other economists have also studied the behaviors of rational self-interest which suggest that most people will act in an economically rational way when faced with behavioral decisions affecting their own personal income and well-being which can also contribute to the positive effects of the Invisible Hand.

Self-interest signifies person’s psychological behavior reflected into economic action. In general, it refers to individual actions and behaviors that provoke personal benefits. Throughout the years, economists have studied self-interest and the behaviors of rational self-interest to help develop theories and assumptions for the economy.

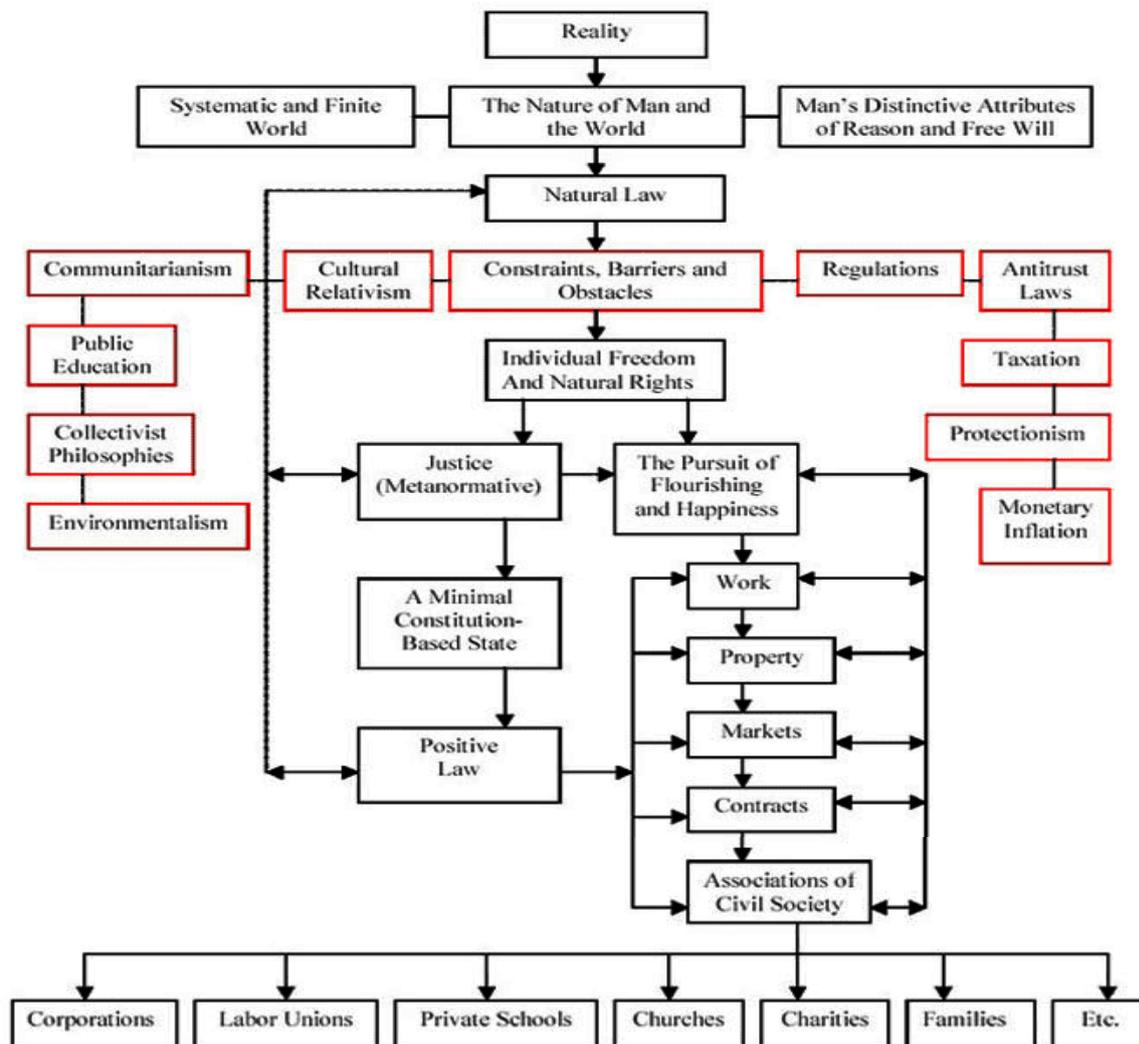
Adam Smith explored the economic effects of self-interest and rational self-interest in his popular book, *The Wealth of Nations*. Smith found that self-interest and rational self-interest were powerful motivators of economic activity. As such, he based his theory of the Invisible Hand on the key propositions i.e., human being are by nature selfish and they behave rationally as ‘economic man’.

4.2 Conceptual Framework and Institutional Setup

Market economy has its own philosophy or worldview regarding human being. It claims to be a rational doctrine based on clear understanding of man and society in which economics, politics and morality are found to be in harmony with one another. As visualized by Younkins^{vi} capitalism is defined as a set of economic arrangements that would exist in a society in which state’s only function would be to prevent one person from using force or fraud against another person. Subsequently, this definition was changed to include roles beneficial to the economy such as social security programs, transfer programs, public corporations, etc.

The following schematic diagram help understand conceptual framework of capitalism along with key infrastructural design consistent with the nature of man and the world.

Figure-1
Conceptual Foundations of Capitalism



5 LINKS BETWEEN ASSUMPTIONS, CONCEPTUAL FRAMEWORK AND INSTITUTIONAL SETUP OF MARKET ECONOMY

5.1 Human Being by Nature Selfish – An Incomplete Characterization?

The conceptual framework of modern economics (interchangeably known as capitalism, market economy, free economy, price system etc.) is deeply rooted in its assumption i.e., the worldview it subscribes in analyzing the core nature of human being.^{vii} It is worthy to look at how human nature has been defined in market economy and whether it leaves room for redefining of it. Adam Smith defines human beings as selfish by nature. Built upon this contention he reasoned if human beings are allowed to fulfill their selfishness they will do their best in their self-aggrandizement leading to the best accomplishments for him individually and thereby the society as a whole.

Putting self-interest in the core of market economy concept Smith coined this to be 'laissez-faire' with little or no government intervention in its running but an *invisible hand*, regulating by means of competition through interplay of supply and demand, establishes equilibrium and stability in the system. Additional concepts such as 'economic man' perceived as rational being and assumptions such as perfect competition and perfect information added strength to the market economy's conceptual framework.

Characterization of human being as selfish and basing on it the foundation of market economy seems to be not complete and convincing. It is not untrue that human beings are selfish (normal instinct) which works as one of the important driving forces of his/her socioeconomic pursuits but this is not the only force they are guided by. They are also seen to be moved by the concerns of common benefit, respond to the people at need and sacrifice their time and resources for the benefits of the mankind (virtues of higher instinct) when they assume the responsibility as vicegerent^{viii} of God for which they are created and put under test^{ix}. If interpreted from economic perspective the selfish+ characterization of human being would help add more effective demand compared to what created from selfishness only.

Modern economics built upon this narrow characterization left numerous shortcomings in developing conceptual framework, operating tools and institutional settings. Selfish economic man, instead of being rational, has turned into a greedy, corrupt and power abuser. Corrupt powerful individuals, business tycoons, political touts all take advantage of their money and muscle power be it locally or at national and global level. Big power states are seen to be invading or colonizing weak countries with falsely implicating weaker states to realize unethical hidden objectives. Corrupt statesman stages war dramas or throws dirt on rival candidate to win over election.

Thus, it can be logically concluded that human behavior characterized by selfishness+ qualities serves better in a market economy than a man guided by self-interest only.

5.2 ‘Economic Man is a Rational Being’ – An Ill-conceived and Narrowly Defined Assumption

In economics, one of the key assumptions is ‘economic man’. Economic man⁸ refers to an idealized human being who acts rationally and with complete knowledge, who seeks to maximize personal satisfaction. Unlike a real human, economic man always behaves rationally in a narrowly self-interested way that maximizes his or her satisfaction.

Economists are aware of the deficiencies of using economic man, though some are more willing to abandon the concept than others. One obvious problem is that human beings don’t always act "rationally," due to their narrow economic self-interest. The economic man concept also assumes that the options faced by economic man offer obvious differences in satisfaction. But it is not always clear that one option is superior to another. Two options may enhance a person’s utility, or satisfaction, in two different ways, and it may not be clear that one is better than the other.

5.3 ‘Perfect Information’ – A Highly Optimistic Assumption in the World of Imperfections

Market economy assumes prevalence of perfect information. There might have lot of reasons why we might not have perfect or even decent information. One big problem with information is that it takes time and energy to gather. Sometimes reliable information cost higher. Thus, in a culture of everyone is to be a rational economic man i.e., buyer with lack of correct information can be deceived by a low quality product delivered or charged higher price by a selfish producer or seller. Selfishness of a producer or a seller may induce to hide perfect information and thereby can be benefitted out of it.

Further, some things are simply unknowable – economists call this fundamental uncertainty. Knowing that perfect information isn’t always an accurate assumption and making decision upon this may turn ridiculous and fallacious.

Asymmetric information, also known as "information failure," occurs when one party to an economic transaction possesses greater material knowledge than the other party. This typically manifests when the seller of a good or service possesses greater knowledge than the buyer; however, the reverse dynamic is also possible. Almost all economic transactions involve information asymmetries. Under this situation disclosing real information on a product by the producer/seller, a higher level human behavior, would be necessary for perfect/effective running of market economy.

6. DEMOCRACY AND MARKET ECONOMY

6.1 Exercise of Free Will in Economics and Politics

Link between democracy and market economy may be discussed under the caption ‘economic democracy’. Economic democracy as a socioeconomic philosophy proposes shifting of decision-making power from corporate managers and corporate shareholders to a larger group of public stakeholders that includes workers, customers, suppliers, neighbours and the broader public. No single definition or approach encompasses economic democracy, but most proponents claim that modern property relations externalize costs, subordinate the general well-being to private profit and deny the polity a democratic voice in economic policy decisions. In addition to these moral concerns, economic democracy calls for compensating capitalism’s inherent effective demand gap.^{xi}

Proponents of economic democracy generally argue that modern capitalism periodically results in economic crises characterized by deficiency of effective demand as society is unable to earn enough income to purchase its output produced. Corporate monopoly of common resources typically creates artificial scarcity, resulting in socio-economic imbalances that restrict workers from access to economic opportunity and diminish consumer purchasing power.^{xii} Economic democracy seeks to promote a concept of larger socioeconomic ideology as a stand-alone theory containing a variety of reform agendas. For example, as a means to securing full economic rights, it opens a path to full political rights. Both market and non-market theories of economic democracy have been proposed. As a reform agenda, supporting theories and real-world examples range from decentralization and economic liberalization to democratic cooperatives, public banking, fair trade and the regionalization of food production and currency.

6.2 Promoting a Culture of Free Competition or Free Cooperation?

Interesting discussions are available on whether free competition contrasts free cooperation or these are two different names of same economic behavior. The general perception is they contrast and are not complementary. However, those who argue these complement and benefit both, include Harwood^{xiii} puts his reasoning as ‘free competition’ would have not been possible without ‘free cooperation’ from factors of production or counterparts in business. This cooperating behavior in free competition produces the greatest possible total benefits to all who participate, he claims.

Similarly, Ludwig von Mises explained, without cooperation each man would have been forced to view all other men as his enemies; his craving for the satisfaction of his own appetites would have brought him into an implacable conflict with all his neighbors. Without the possibility of mutual benefit from cooperation and the division of labor, neither feelings of sympathy and friendship nor the market order itself could arise.

The above two reasoning uncover the fact that participation is a *necessary condition* to be in competition that may not turn into cooperation until and unless both make them free from selfish behavior (lower instinct) and be sure about both have faith in and are ready to cooperate, *sufficient condition*, in attaining higher level objectives (higher human instinct) defined by human role as vicegerent of god in earth.

6.3 Market Imperfections and Their Impact on Market and Policy Making

An imperfect market refers to any economic market that does not meet rigorous standards of a perfect or purely competitive market, as established by Marshallian partial equilibrium models. Imperfect markets are found in the real world and are used by businesses and other sellers to earn profits. All real-world markets are theoretically imperfect and can be influenced by the factors such as: (a) Competition for market share; (b) High barriers to entry and exit; (c) Different products and services; (d) Prices set by price makers rather than by supply and demand; (e) Imperfect or incomplete information about products and prices; and (f) A small number of buyers and sellers. Situation may arise when too few sellers control too much of a single market when prices fail to adequately adjust material changes in market conditions.

Deviations from perfect competition may call for government intervention to promote increased efficiency in production or distribution. Such interventions may come in the form of monetary policy, fiscal policy, or market regulation. One common example of such interventionism is anti-trust law explicitly derived from perfect competition theory. In line with this governments may use taxation, quotas, licenses, and tariffs to help regulate so-called perfect markets. Other economists argue that government intervention may be necessary to correct imperfect markets, but not always. This is because governments are also imperfect, and government actors may not possess the right incentives or information to interfere correctly. Finally, many economists argue government intervention is rarely, if ever, justified in markets. The Austrian and Chicago schools notably blame many market imperfections on erroneous government intervention.

7. TOOLS FOR REALIZING EFFICIENCY AND STABILITY IN THE GLOBAL MARKET ECONOMY

Promoting financial efficiency and stability is an eminently important task for public policy. Macroeconomic tools such as monetary and fiscal policy measures are employed for attaining efficiency and stability of global economy. For this, an efficient and stable financial system is an important precondition for strong economic performance of any country and global economy as a whole. There are three key concepts and policy objectives of price stability, financial stability and financial efficiency.

Price stability is defined as a state in which the general price level is literally stable or the inflation rate is sufficiently low and stable. This general definition is widely accepted. Of course, some debate prevail on the appropriate choice and composition of the price index, the precise quantitative definition or operational target for price stability and the appropriate time horizon over which monetary policy should aim at preserving price stability.

There is less clarity and agreement on the definitions of financial stability and financial efficiency. One useful way of describing financial stability is as a condition in which the financial system – comprising financial intermediaries, markets and market infrastructures – is capable of withstanding shocks and unraveling of financial imbalances within a foreseeable future.

Financial efficiency can be defined as a condition in which the resources available in a financial system are allocated to the most valuable investment opportunities, at the lowest possible cost. In an efficient financial system, markets are competitive, information is accessible and widely disseminated, and the conflicts between borrowers and lenders that arise from agency problems are effectively dealt with through market contracts.^{xiv} In this way, financial efficiency contributes to minimizing the spread between borrowing and lending rates, as well as the dispersion of risk-adjusted borrowing costs across individuals.^{xv}

7.1 Performance of Global Economy and Risk Ahead

Global growth in 2019 is projected to slow to 2.6 percent, 0.3 percentage point below previous forecasts, due to weaker-than-expected trade and investment at the start of the year. Global trade growth in 2019 has been downgraded to 2.6 percent—the weakest pace since the global financial crisis. Global growth is expected to gradually rise to 2.8 percent by 2021, assuming continued benign global financing conditions, as well as a modest recovery in emerging market and developing economies (EMDEs) previously affected by financial market pressure. Risks are firmly on the downside, in part reflecting the possibility of destabilizing policy developments, including a further escalation of trade tensions between major economies. It is urgent for countries to reinforce policy buffers against possible negative shocks and to implement reforms that promote private investment and improve public sector efficiency.^{xvi}

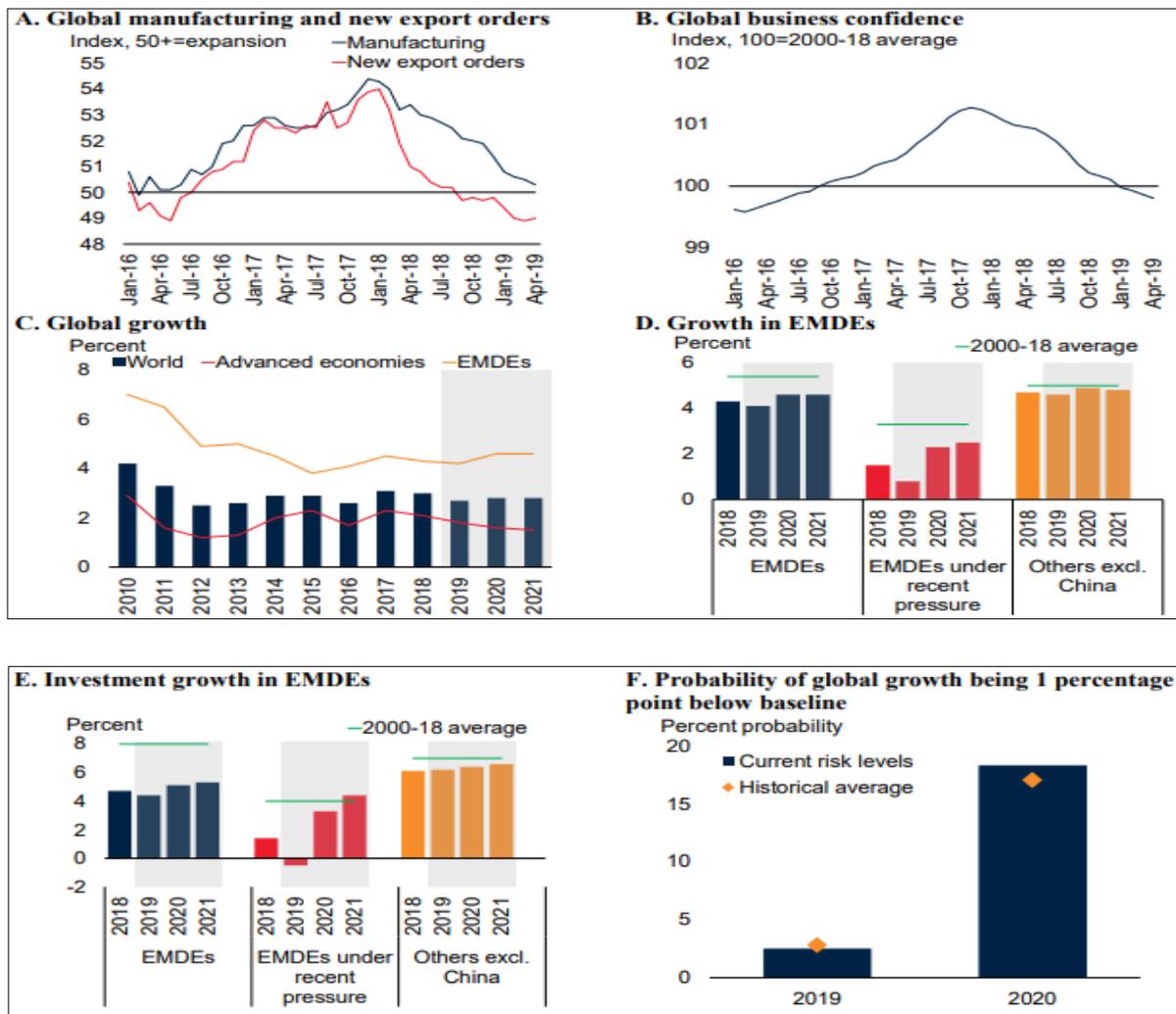
Global economic activity continued to soften at the start of 2019, with international trade and manufacturing showing signs of marked weakness (Figure A). Heightened policy uncertainty, including a recent re-escalation of trade tensions between major economies, has been accompanied by a deceleration in global investment and a decline in confidence (Figure B). Slowing activity in advanced economies and China is expected to be accompanied by a modest cyclical recovery in major commodity exporters and in a number of EMDEs affected by recent pressure (Figure C).^{xvii}

EMDE activity has been markedly weaker than expected, with a substantial softening in external demand, heightened global policy uncertainty, and subdued investment only partially offset by recent improvements in external financing conditions. As a

result, EMDE growth is projected to pick up from a four-year low of 4 percent in 2019—0.3 percentage point below previous projections—to 4.6 percent in 2020-21.

Risks continue to be tilted to the downside. Confidence and investment could be markedly impacted by a sudden rise in policy uncertainty—triggered, for instance, by substantial new trade barriers between major economies that lead to cascading trade costs and a lack of clarity about future trading rules.

Figure-2



7.2 Global Financial Stability and Risks

The global financial system undergoes through an unprecedented vulnerabilities due to (a) Rising corporate debt burdens; (b) Increasing holdings of riskier and more illiquid assets by institutional investors; and (c) Greater reliance on external borrowing by emerging and frontier market economies.

Under this situation policymakers are to:

- Address corporate vulnerabilities with stricter supervisory and macro-prudential oversight
- Tackle risks among institutional investors through strengthened oversight and disclosures
- Implement prudent sovereign debt management practices and frameworks

Financial markets are in pressure with the trade tensions and growing concerns about the global economic outlook. Weakening economic activity and increased downside risks have prompted a shift toward a more dovish stance of monetary policy across the globe, a development that has been accompanied by sharp declines in market yields. As a result, the amount of bonds with negative yields has increased to about \$15 trillion. Investors now expect interest rates to remain very low for longer than anticipated at the beginning of the year.

Capital flows to emerging markets have also been spurred by low interest rates in advanced economies. These inflows of capital have supported additional borrowing: median external debt in emerging market economies. Greater reliance on external borrowing in some frontier market economies could also increase the risk of future debt distress.

Regulation put in place in the wake of the global financial crisis has improved the overall resilience of the banking sector, but pockets of weaker institutions remain. Negative yields and flatter yield curves—along with a more subdued growth outlook—have reduced expectations of bank profitability, and the market capitalization of some banks has fallen to low levels.

Against the backdrop of easy financial conditions, stretched valuations in some markets, and elevated vulnerabilities, medium-term risks to global growth and financial stability continue to be firmly skewed to the downside. Macroeconomic and macro-prudential policies should be tailored to the particular circumstances facing each economy. In countries where economic activity remains robust but vulnerabilities are high or rising amid still easy financial conditions, policymakers should urgently tighten macro-prudential policies, including broad-based macro-prudential tools (such as the countercyclical capital buffer). In economies where macroeconomic policies are being eased in response to a deterioration in the economic outlook, but where vulnerabilities in particular sectors are still a concern, policymakers may have to use a more targeted approach to address specific pockets of vulnerability. For economies facing a significant slowdown, the focus should be on more accommodative policies, considering available policy space.

Global policy coordination remains critical. There is a need to resolve trade tensions. Policymakers should also complete and fully implement the global regulatory reform agenda, ensuring that there is no rollback of regulatory standards. Continued international coordination and collaboration is also needed to ensure a smooth transition from LIBOR to new reference rates for a wide range of financial contracts around the world by the end of 2021.

7.3 ROOT CAUSES OF BUSINESS CYCLE AND FINANCIAL CRISIS

7.3.1 Cause 1: Fractional reserve banking

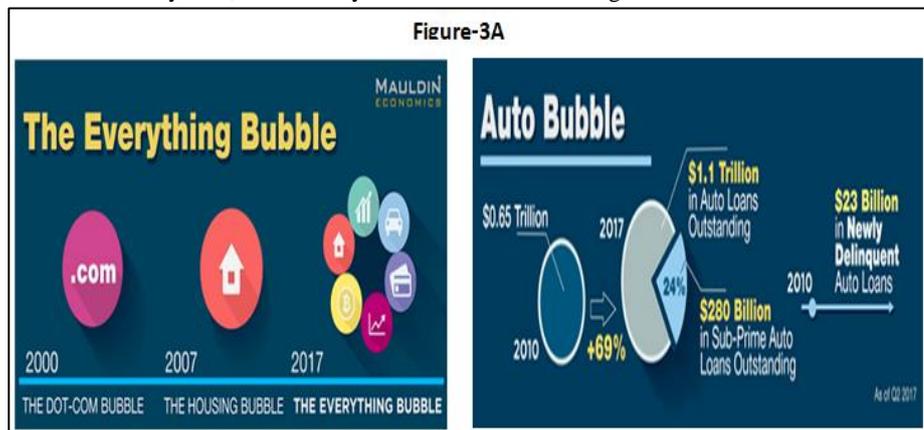
The well-known Chicago Plan^{viii} outlined vividly how the notion of ‘self-interest’ gave birth to an illegal fractional reserve system/banking and subsequently legalized under an obsessed situation controlling privately the majority share of money in circulation leaving a little or effectively no control by public or sovereign entities serves continuously as one of the major sources of business cycles and financial crises. The analysis is so clear and convincing by not only of the power of logic but also of the rigorous objective review of socio-politico-economic progression of thoughts influenced by unethical use of money power. The formulators of the Chicago Plan proposed an 100% reserve banking in place of fractional reserve banking to get rid of devastating effects of business cycles and financial crash.

Under a 100% requirement, the Monetary Authority would replace the banks as the manufacturer of circulating medium. As long as population and trade continue to increase there will be, in general, a need for increasing the volume of money in circulation. The Monetary Authority might satisfy this need by purchasing and retiring Government bonds with new money. This process would operate to reduce the Government debt.^{ix}

7.3.2 Cause 2: Creation and burst of credit bubbles through debt-financing

A reverse-pyramid style financing, based on a scanty debt, alternatively known as credit bubbling has been blamed for another serious cause of boom and burst.

The Chicago Plan gives an idea how it works when it says, ‘the banks have often expanded the volume of the means of payment when it should have been contracted, and contracted it when it should have been expanded. For this, bankers are not to be blamed; the fault lies with the system which ties the creation of our means of payment to the creation of the debts to, and by, the banks.



Moreover, this system has been advantageous to the banks only by fits and starts, chiefly during boom periods when the volume of loans was high. When crash and depression have arrived, the system has resulted in serious trouble for the banks. Thousands of banks failed primarily because of “frozen” assets due in large part to the fact that their demand deposits were based on slow assets like land and industrial equipment which could not yield cash when suddenly needed.^{xx} Recent form of credit bubbling in the name of financial architectures is also a case to note. The following pictorial images smartly informative provide depth and breadth of how dangerous can be these credit bubbles for the economy, national or global.

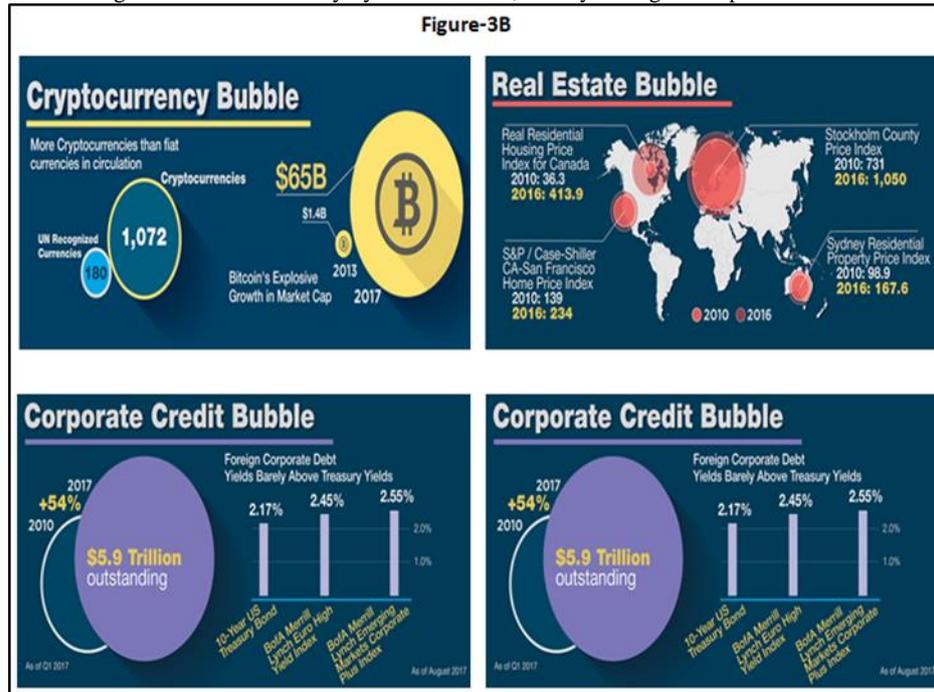


Fig-3A depicts dot.com bubble of 2000, housing bubble of 2007 and the everything bubble in 2017. Auto-bubble soared up by 69% from 2010 to 2017 amounting \$1.1 trillion.

There was an explosive growth of *crypto currency*. Against 180 UN recognized currency, crypto currency outnumbered to 1,072 and its circulation, only in 5 years, increased from \$1.4 billion in 2013 to \$65 billion in 2017. Mentionable that operation of crypto currency has taken home in uncharted territory with unknown issuing authority having no government control. Similarly, there were phenomenal growth of real estate and corporate credit bubbles during 2010-2017 (Fig-3B).

7.4 IS THE GLOBAL ECONOMY HEADING TOWARDS ANOTHER FINANCIAL CRISIS?

7.4.1 Current global financial outlook

The global economy entered into a territory of secular stagnation and heading towards a fresh economic and financial crisis soon which will have devastating impact on democratic process. It is unlikely that nations would learn soon from the past longest ever recession and take reform initiative even after passing a decade of financial meltdown since 2008. Frustration goes on mounting not because the solutions of the long lasting recurring business cycles and financial problems are not at hand. Rather unknown reluctance of entities not interested in those well-thought-out recommendations prescribed by highly regarded economists and policy planning specialists from key universities, central banks and global financial institutions.

The October 2019 Global Financial Stability Report visualize key vulnerabilities in the global financial system as follows:

- Rising corporate debt burdens
- Increasing holdings of riskier and more illiquid assets by institutional investors
- Greater reliance on external borrowing by emerging and frontier market economies

Financial markets have been struggling to progress amidst trade tensions and growing concerns about the global economic outlook. Weakening economic activity and increased downside risks have prompted a shift toward a more careful monetary policy across the globe in the backdrop of sharp declines in market yields. Bonds’ negative yield has increased to about \$15 trillion. Investors expect interest rates to remain very low for longer than anticipated at the beginning of the year. Accommodative monetary policy is supporting the economy in the near term, but easy financial conditions are encouraging financial risk-taking and are fueling a further buildup of vulnerabilities in some sectors and countries.

Corporate sector vulnerabilities are on the increase in several important economies as a result of rising debt burdens and weakening debt service capacity. In a material economic slowdown scenario corporate debt-at-risk (debt owed by firms that are unable to cover their interest expenses with their earnings) could rise to \$19 trillion—or nearly 40 percent of total corporate debt in major economies—above crisis levels.

Very low rates are prompting investors to search for yield and take on riskier and more illiquid assets to generate targeted returns. Vulnerabilities among nonbank financial institutions are now elevated in 80 percent of economies with systemically important financial sectors (by GDP). This share is similar to that at the height of the global financial crisis. Vulnerabilities also remain high in the insurance sector. Capital flows to emerging markets have also been spurred by low interest rates in advanced economies. These inflows of capital have supported additional borrowing: median external debt in emerging market economies has risen to 160 percent of exports from 100 percent in 2008. In some countries, this ratio has increased to more than 300 percent. In the event of a sharp tightening in global financial conditions, increased borrowing could raise rollover and debt

sustainability risks. For example, some over-indebted state-owned enterprises may find it harder to maintain market access and service their liabilities without sovereign support.

Greater reliance on external borrowing in some frontier market economies could also increase the risk of future debt distress.

7.4.2 Signs, timing and form of the next global financial crisis

All the signs of the next financial crisis are visible now. Timing and form of the crisis are coming out in different reports, analysis and surveys. It is widely recognized that the crisis has started with trade-wars, tariff walls. It is also presumed that it would be a multi-sector crisis and more devastating. Currency devaluation with contagion effects is underway. Apprehension of the collapse of petro-dollar system and currency reset were a much talked about issue in the immediate past.

A very recent survey conducted by Markets Insider in August 2019 among the business economists summarizes the US economy appears poised to enter a recession within the next two years. More than 70% of economists surveyed by the National Association for Business Economics^{xxi} said they think a recession will occur before the end of 2021.^{xxii}

The spread between two- and 10-year Treasury yields has fallen below zero for the first time since 2007. The relationship is the most closely watched section of the so-called yield curve, and it has inverted before each of the last seven recessions.

The inversion has been a long time in the making, as the curve has been flattening for months. The spread got the final push into negative territory on Wednesday as disappointing Chinese retail sales and industrial output combined with a German economic contraction to muddy the outlook for global growth.

"We have been in a bit of a perfect storm for the rates market recently," Charlie Ripley, a senior investment strategist at Allianz Investment Management, told Markets Insider in an interview. "This has definitely been a strong signal for recession, so people are watching this very closely."^{xxiii}

According to World Bank a country would cross Tipping Point when its public debt as percent of GDP goes beyond 77, in case of US its Debt-GDP ratio has gone beyond 106% (Table-1).

Table-1: Percentage of Public Debt to GDP

Country	2012	2013	2014	2015	2016	2017	2018
Bangladesh	36.221	35.82	35.273	33.681	33.331	33.098	33.36
China	34.269	36.997	39.92	41.066	44.177	46.96	50.104
Denmark	44.894	44.046	44.27	39.926	37.868	35.294	34.739
Egypt	73.8	84.021	85.127	88.458	96.841	103.04	92.519
France	90.602	93.412	94.889	95.582	96.587	96.801	96.688
Germany	79.877	77.506	74.594	70.904	67.9	63.852	59.786
Greece	159.586	177.946	180.212	178.779	183.453	181.779	188.064
India	69.123	68.548	67.811	69.962	69.516	71.176	69.554
Indonesia	22.96	24.847	24.682	27.46	28.335	28.768	29.83
Iran	12.126	10.715	11.822	38.415	47.47	39.53	44.213
Japan	229.008	232.469	236.069	231.261	235.589	237.647	238.225
Jordan	80.718	86.678	89.049	93.391	95.073	95.855	95.966
Malaysia	54.552	56.447	56.16	57.877	56.183	54.123	55.101
Netherlands	65.511	67.005	67.1	63.97	61.299	56.45	53.099
New Zealand	35.724	34.606	34.234	34.3	33.455	31.696	30.357
Pakistan	63.243	63.863	63.472	63.324	67.633	66.962	72.535
Qatar	32.118	30.883	24.912	35.547	46.707	53.767	53.402
Russia	11.908	13.092	16.038	16.325	16.051	15.53	15.33
Saudi Arabia	3.036	2.146	1.562	5.8	13.093	17.206	19.39
Spain	85.737	95.451	100.367	99.439	98.988	98.364	97.154
Sri Lanka	69.609	71.776	72.217	78.487	79.609	79.102	78.004
Tunisia	47.676	46.845	51.529	55.429	62.271	70.331	70.497
Turkey	32.724	31.382	28.769	27.643	28.311	28.261	32.332
United Kingdom	84.088	85.15	87.014	87.876	87.909	87.525	87.38
United States	103.338	104.882	104.576	104.79	106.838	105.199	106.1414

Data source: Global Finance. <https://www.gfmag.com/global-data/economic-data/public-debt-percentage-gdp>

7.4.4 Weakness of the tools applied in managing market economy

There has been a thorough review of the past business cycles and financial crashes by this author in 2010^{xxiv} and Jerome Benes and Michael Kumhof in 2012 after the most devastating financial crisis of 2007 followed by the longest ever recession known as Great Recession. They reviewed The Chicago Plan in the context of past economic recessions and financial crises including the one known as Great Depression of 1929. They reaffirmed the weaknesses of the tools of managing market economy identified by the analysis in Chicago Plan and all those recommendations made therein are still valid to current booms and bursts phenomena the world economy faces. Their observations and recommendations particularly the key ones are as follows:

A. Chicago Plan-1933

- Key features:
 1. 100% reserve banking replacing the fractional reserve banking system
- Advantages:
 1. Much better control of a major source of business cycle fluctuations, sudden increases and contractions of bank credit and of the supply of bank-created money.
 2. Complete elimination of bank failures.
 3. Dramatic reduction of the (net) public debt.

4. Dramatic reduction of private debt, as money creation no longer requires simultaneous debt creation.

B. The Chicago Plan Revisited by Jeromir Benes and Michael Kumhof^{xxv}

- Reaffirmed that
 1. Banks should be required to have full coverage for money they lend, 100% reserve banking
 2. Resulting banks would no longer be allowed to create new money in the form of creating credit in connection with their lending activities.
 3. Instead, the central bank should be solely responsible for creation of all forms of money, not just paper money and coins.

8. CHANGES NEEDED IN MARKET ECONOMY

Still there might be some other reasons for which market economy would bring out more changes in it to equip and make it fully functional in mitigating problems of business cycles and financial crises. We may put forward few more observations on the functionality of the Chicago Plan.

8.1 How Far the Chicago Plan Workable?

- 100% reserve banking - a step forward only
- A partial solution to the problem of business cycle
- Debt-based lending is a key source cause of business cycle
- Lending must be tied to and backed by real economic goods
- Need for a new banking model ensuring direct participation of bank and borrowers in risks and returns to establish direct link between banking and real economic activities

8.2 Towards a New Banking Model: From Keynesian MEI to PLS-Model

In this sub-section we shall define banking efficiency criteria and apply these to make a comparison between Keynesian Investment Decision Model and PLS-banking Model.

8.2.1 4-Economic efficiency criteria applied to banking

Fig-4 incorporates definition of four economic efficiency criteria applied to banking also known as Banking Efficiency Conditions viz. Productive, Allocative, Distributional and Stabilizational Efficiency. Each efficiency condition is defined by criterion name and corresponding operating rule read row-wise.

Fig-4: Four Economic Efficiency Conditions in Financing

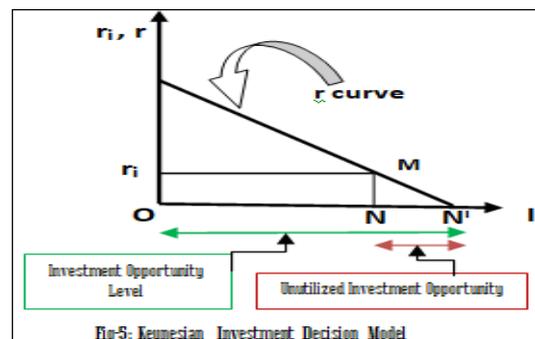
	Criteria	Rule
1	Productive Efficiency:	Investment Opportunity Utilization: The more the Better
2	Allocative Efficiency:	Financing according to Profitability
3	Distributive Efficiency:	Equitable Participation in Risk and Returns
4	Stabilizational Efficiency:	Capacity to counter Cyclical Fluctuations

8.2.2 Investment Opportunity Level in Keynesian Investment Decision Model

Defining investment opportunity exits so long in an economy with its projects having rate of return greater than equal to zero, i.e., $r \geq 0$, at level ON^{\wedge} , as shown in Fig-5. Under Keynesian Investment Decision Model the Unutilized Investment Opportunity level is NN^{\wedge} .

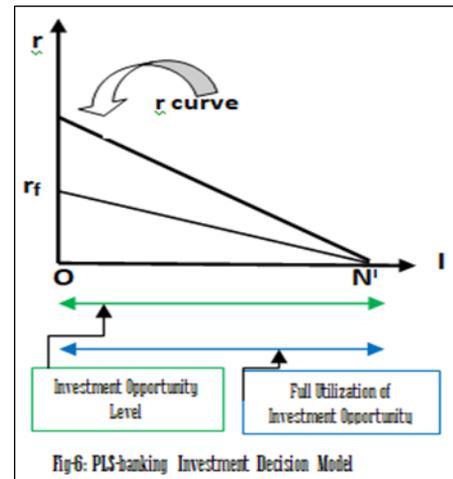
8.2.2.1 Does Keynesian model satisfy economic efficiency conditions?

Unfortunately, banking under Keynesian model satisfies none of the economic efficiency criteria: (a) Regarding *productive efficiency* we have already explained in Fig-5 that Keynesian model cannot finance beyond ON level, leaving NN^{\wedge} level of investment opportunity unutilized – thereby disregarding productive efficiency; (b) As regards *allocative efficiency*, it does not follow the principle of economic efficiency, i.e., financing projects in terms of profitability, as it charges flat interest rate irrespective of project profitability; (c) So far as compliance with the third criterion, i.e., the *distributive efficiency*, it lacks mechanism to promote fair distribution of income generated through banking. As the model allows to charge flat interest rate irrespective of the rate of return of projects, favoring the favored - a policy may match with the philosophy of capitalism, but contrasts vehemently with the much talked about concept relating problem of ‘effective demand’. In reality, one of the source causes of the problem of effective demand is the equity blunt institution of conventional banking, an insurmountable paradox with capitalism, and (d) As regards *stabilizing efficiency*, debt-based fractional reserve banking was found to be the source cause of business cycles and global financial crash vividly mentioned in The Chicago Plan 1933^{xxvi} and The Chicago Plan Revisited 2012.^{xxvii}



8.2.3 Investment Opportunity Level under PLS Model

PLS banks can go on financing up to ON' level, the full investment opportunity level in the economy, as it shares in profit while financing projects so long as the projects have $r \geq 0$ as seen in Figure-6. Here we have shown that a PLS-bank can utilize full investment opportunity, i.e. ON' because it has built-in system capacity to finance projects having up to zero profitability. This proves that PLS-banking satisfies the first efficiency condition, i.e., *productive efficiency*. Of course, it is possible under the assumption that only PLS banks operate in the economy.

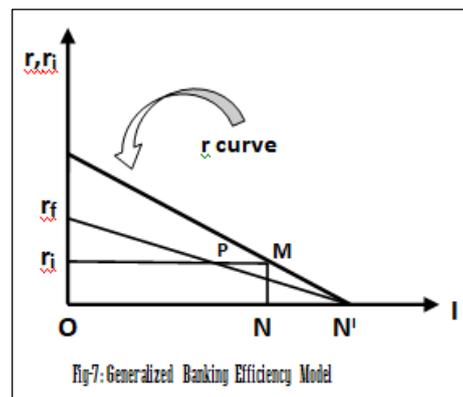


8.2.3.1 How far PLS-banking satisfies rest of the efficiency conditions?

PLS-banking satisfies fully the rest of the efficiency conditions. It is the novelty of its financing model which is based on the principle of participation in profit and loss. So while deciding to finance a project, it ranks all projects in queue in terms of profitability in descending order and starts financing from the top and in this way finance the last one with zero profitability. It's a marvelous way of satisfying the second efficiency criterion, i.e., the *allocative efficiency*. Participation in profit and loss of financed projects - a principle followed by PLS-banks - can be the soundest argument that it satisfies the third efficiency criterion, i.e., *distributive efficiency*, in the best possible way. The r_f curve (ratio-sharing) divides available profit in the economy (below r -curve) between the borrowers and bank demonstrates the level of fairness upheld in PLS-banking in terms of distributive efficiency.

Banking based on PLS model can also function as built-in stabilizer to shocks and crises in a market economy and help avoid effectively business cycle and financial crisis.

The reason is that following the principle of profit and loss bank in agreement with borrower agrees to share actual profit generated both in booms and recession (assuming there would be still booms and recession of certain magnitude in market economy) for which business shutdown and bank failure will be minimal or zero justifying PLS-banking by design works as built-in stabilizer to economic fluctuations in market economy. Thus, PLS-banking proposition, if applied, would likely to save market economy from many of the odds and agonies it face under a fractional reserve based banking system.



8.2.4 Generalized Banking Efficiency Model^{xxviii}

Generalized Banking Efficiency Model is an attempt to develop a comprehensive banking efficiency model based on four basic economic efficiency conditions wherein efficiencies of both banking can be studied and compared.

Technically speaking, the generalized banking efficiency model works as a reference model for both Keynesian and PLS-banking while analyzing how far each of the individual models satisfies the four efficiency conditions: Productive, Allocative, Distributional and Stabilizing efficiency. The Generalized Banking Model (Fig-7) is built upon the sole assumption that PLS-banking and banking under Keynesian framework work separately in different economy.

8.2.5 Comparing System Efficiency of Conventional & PLS-banking

Here the comparison of system efficiency between the two systems, conventional and PLS-banking, has been made as if they operate separately in two different countries. Under this situation, system efficiency level of the said two types of banking will be as presented in Fig-8.

Fig-8: System Efficiency Level of Conventional & PLS-banking

Criteria	Rule	Conventional Banking	PLS-Banking
Productive Efficiency:	Investment Opportunity Utilization: <u>The more the Better</u>	Partial	Full
Allocative Efficiency:	Financing according to Profitability	Nil	Full
Distributive Efficiency:	Equitable Participation in Risk and Returns	Nil	Full
Stabilizational Efficiency:	Capacity to counter Cyclical Fluctuations	Nil	Full

9. CONCLUSION AND RECOMMENDATIONS

9.1 Concluding Remarks

Market economy exists from the dawn of human civilization. Theorization of it under professional cover i.e., setting assumptions, building conceptual framework or modeling and developing functionality in its modern sense is rather of recent origin dated back not more than two and a half century. Understood or not, endorsed or disliked the institution of interest is a fact of human life impacting peoples' moral, philosophical, economic and political life. The concept of interest lies in the heart of modern economics providing monetary products, managing tools and controlling mechanisms functioning under a full-fledged institutional infrastructure encompassing the entire market economy. Without its reference no financial product, tools and techniques and institutionalization of modern economy is understood, policies framed, implemented and the courses of economy

regulated. So the outcomes, good or bad regularly surfaced in the market economy, are the corollary of the institution of interest. Regularly happening of business cycles - booms and bursts, recessions and financial crashes - are of its systemic ramifications.

Almost in every decade, market economy rebirths from self-distraction caused by its own interest-based monetary regime failure. So the notion that market economy runs automatically, freely, fairly without intervention from outside even by the government is no longer valid. Because, during financial crash followed by recession, the economy has to survive on sovereign bailouts resorting to more and more debt creation by means of deficit financing sounds self-defeating.

Since the beginning of formal interest-based banking in 1350 AD, there had not been any basic change in the institution of interest except two separate line of prescriptions put forward soon after the Great Depression: (1) Proposal for government intervention by Lord Maynard Keynes during recession when rate of interest as a monetary policy tool ceases effectiveness; (2) Introduction of 100% reserve banking replacing the ongoing fractional reserve banking recommended under The Chicago Plan.

Fortunately, since then Keynesian prescriptions are in practice in the form of government intervention to bring back rejuvenation of economic activities during recessions. Keynes showed the path of deficit budgeting which has been an established pattern and very much lucrative policy for now-a-days governments. The implications are: (a) the regular feature of economic booms and burst (including financial and capital market crash) has been accepted as a built in regular feature of market economy legalizing bailout as constant monetary policy of Federal Reserve System; (b) rewarding wind-fall income gains by big investors at the cost of wiping out capital of million small investors; and (c) giving life to numerous failed banks by government bailout.

Unfortunately, the Chicago Plan prescribing the path to wiping out business cycle and financial crash was not accepted. That means, the business cycles and financial crash followed by bank failures will continue at bigger scale; along with everything bubble, flattening deficit budget by resorting to public borrowing would add another more serious factor in accelerating financial crash in a larger scale. So, the market economy is suffering from hyper-tension with the expectation of rebirth from ruin in every decade. The source causes of the problem are (i) the interest-based fractional reserve banking; (ii) burgeoning public debt.

9.2 Recommendations

The following recommendations are put forward for bringing key changes in the operation of market economy so that it can get of problems like business cycles, financial crash:

- i) Full implementation of the Chicago Plan: Introduce 100% reserve banking repealing fractional reserve-based banking
- ii) Consider switching over to PLS-banking from debt-based banking as a means of getting total relief from effects of recurring business cycles and financial crashes
- iii) Strengthen collaborative research on PLS-banking.

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