

# Systemic Debt Crises in International Disequilibrium System

*Hema Senanayake*  
*Rev. W. Wimalaratana*  
*Kumar David*

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## *Abstract*

Global Savings Glut (GSG) hypothesis has become the predominant and official theory attempted to explain the global financial crisis of 2008 and the Great Recession of 2008 – 2009. “... it is impossible to understand this crisis without reference to the global imbalances” (Bernanke, 2009). Any possible “global imbalance” must be connected to the international terms of trade and international exchange rate mechanism. GSG theory argues that the overwhelming credit (debt) growth occurred in the U.S. prior 2008, was due to savings made by certain trading partners, which resulted for the U.S. to have a persistent Current Account deficit and prevented the ability to increase interest rates by the U.S. monetary authorities to reduce current account deficit, as significant capital inflows from those countries took place. Yet, the paper observes that debt crises take place in countries where there are Current Account surpluses. This conundrum needs to be examined. Hence, the paper finds that another empirically verifiable proposition could possibly be used to explain the systemic debt crises better.

*Keywords:* Exchange rate mechanisms, Global debt crises, Savings glut, Systemic gap.

**JEL Codes:** E60, E61, F52, F54, F62

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### ***Hema Senanayake (Corresponding Author)***

*Doctoral Student of the Department of Economics, University of Colombo*

*Tel: +1-646-266-2537, Email: [hemasenanayake@yahoo.com](mailto:hemasenanayake@yahoo.com)*

 <https://orcid.org/0000-0001-9182-9444>

### ***Rev. W. Wimalaratana***

*Department of Department of Economics, Faculty of Arts, University of Colombo*

*Tel: +94 714289577, Email: [wimala10@gmail.com](mailto:wimala10@gmail.com)*

### ***Kumar David***

*Former Dean, Hong Kong University of Science and Technology*

*Tel: +94 11 2713 985, Email: [eeakdavi@gmail.com](mailto:eeakdavi@gmail.com)*

## INTRODUCTION

The objective of this paper is to examine systemic debt crises in International Disequilibrium System which disequilibrium is typified by the disequilibrium in terms of trade. This disequilibrium has led to have “savings glut” in certain countries like China, South Korea, Japan, Saudi Arabia, etc. while having saving deficiency in certain major economies like the USA. Then, the mentioned global savings glut was identified as the main cause to create a severe unsustainable debt bubble prior to the Great Financial Crash of 2008 in the United States and European Union. This proposition was hypothesized as “Global Savings Glut Hypothesis” by a former Federal Reserve chairman, namely, Ben S. Bernanke<sup>1</sup>. This paper observes that debt crises occur in countries where there are continuing trade surpluses too. Hence, the objective of this paper is to examine this conundrum.

The invisible hand controls the market economy making the highest wellbeing of the all involved parties. It is assumed that market forces guarantee the equilibrium even though there are fluctuations. Adam Smith maintains that the "Every individual necessarily labors to render the annual revenue of the society as great as he can. He generally neither intends to promote the public interest, nor knows how much he is promoting it ... He intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention." He further maintains that "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest." (The Wealth of Nations, 1776). The early economists, especially those who promoted market mechanism, emphasized only the supply side of the economy. They trusted self-correction of the market mismatches by market forces themselves.

The long history of market economies provides ample evidence about long lasting and ever persisting mismatches of the supply and demand forces of economies. The savings surplus in certain countries is assumed to be one of them. Observations on such savings glut paved the way for a new hypothesis in the middle of the first decade of this century, call “Global Savings Glut (GSG) Hypothesis.” Subsequently, GSG hypothesis has become the predominant and official theory attempted to explain the “global” financial crisis of 2008 and the Great Recession of 2008 – 2009. Ben S. Bernanke observed that, “In my view ... it is impossible to understand this crisis without reference to the global imbalances” (Bernanke, 2009). According to Bernanke, Global Imbalances have created a GSG which led to create overwhelming debt in the U.S. and in European Union which

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<sup>1</sup> Ben S. Bernanke served two terms as the Chairman of the Federal Reserve, the central bank of the United States, from 2006 to 2014. During his tenure as chair, Bernanke directly involved in designing the Federal Reserve's response to resolve the Great Recession of 2008 – 2009

created the great financial crash. Accordingly, this paper intends to briefly investigate GSG and its validity in explaining debt crises.

Any possible “global imbalance” must be connected to the international terms of trade and international exchange rate mechanism. It is obvious that this subject cannot be satisfactorily discussed without understanding the historical evolution of international exchange rate mechanism. Since, this paper, immediately after the methodology section, begins with a discussion of international exchange rate system, starting from the end of World War II, as it marks the first fully negotiated fixed global exchange rate system started with the Bretton Woods agreement.

However, it may presume that such discussion would be purely academic and has no practical value for policy makers, as the world is moving with no significant signs of long-term severe crises. Yet, it seems, that such optimism is not well founded on the backdrop of rising global debt levels. By the end of 2018, global debt amounted to USD 188 trillion; global debt to GDP ratio edged up to 226%. Surprisingly, developed economies bear the much of the burden than emerging and developing economies except China, hence it poses continuing higher risk to global economy. This discussion is timely at least out of academic curiosity. The paper ends by examining another empirically verifiable proposition that could possibly be used to explain the systemic global debt crises accurately.

### **REVIEW METHODOLOGY**

It has been observed that, “Traditional literature reviews often lack thoroughness and rigor and are conducted ad hoc, rather than following a specific methodology” (Snyder, 2019). Hence, a comprehensive search of peer reviewed journal articles related to the topic was conducted. Since some concepts like Global Savings Glut hypothesis, are rather new and hence, searched for the author’s original propositions, published in authoritative documents such as Federal Reserve Board papers etc. Further, the key words were used to make an enhanced search to track key journal papers written on the international disequilibrium system. As a result, landmark journal paper written in 1961 was found. This paper titled “Optimum Currency Area” (Mundell, 1961) which has had tremendous influence in major policy applications with global implications in the United States and Europe. This paper argued to do away with fixed exchange rate mechanism established under Bretton Woods Agreement of 1944 and it was done in 1971 by implementing a flexible exchange rate mechanism to eliminate terms of trade disequilibrium that the U.S. had with Europe. Also, the same paper argued in favor of establishing monetary unions and it contributes to the creation of European Monetary Union. “The modern intellectual background of monetary unification was provided by the optimum currency area (OCA) theory, first elaborated by Mundell (1961) and then further developed by McKinnon

(1963) and other scholars” (Dabrowski, 2019). Further, the impact of this paper continues. In the paper, it was argued that the flexible exchange rate mechanism would not work if monetary authorities of the countries which have surpluses prevent the natural adjustment of exchange rate and this analysis contributes to the imposition of tariffs by the U.S. under president Trump’s administration, against major trading partners including China. Any such ‘discovery’ of major peer reviewed article/s would open the path for systematic and focused review. This review got that opportunity.

## **FULLY NEGOTIATED FIXED EXCHANGE RATE SYSTEM BORN**

The World War II ended in September 1945. Even before the end of the war, the leaders of the allied nations and economic thinkers such as John Maynard Keynes<sup>2</sup> and Harry Dexter White<sup>3</sup> had paid attention to create a new stable international payment system. A system was agreed upon in July 1944, in Bretton Woods in New Hampshire. This agreement became known as Bretton Woods Agreement. The Bretton Woods Agreement<sup>4</sup> established a new global monetary system. It replaced previously existed gold standard with the U.S. dollar as the global currency. The system agreed upon was, for a fixed exchange rate system.

Under the agreement, countries promised that their central banks would maintain fixed exchange rates between their currencies and the dollar. And the United States promised that Federal Reserve would issue one ounce of gold for every 35 dollars presented. The promise of the U.S. seemed to be credible as the U.S. had nearly 2/3 (two third) of gold reserves in the world by that time. Thus, a fixed exchange rate system came into effect.

However, under this system, if any country faces a temporary balance-of-payment problem, it might need to borrow US dollars. In order to facilitate and regulate this process, an institute by the name of International Monetary Fund (IMF) was established. The IMF was officially established on December 27, 1945 when twenty-two member countries signed the Articles of the Agreement of IMF.

After the World War II, this system of fixed exchange rate worked very well until the “Nixon shock” in 1971. The West European countries were devastated by the world war II, re-built their economies rapidly with the support of the Marshall Plan. Yet, in the decade of 1960s the fixed exchange rate system began to create problems even though it worked fairly well in late 1940s and 1950s.

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<sup>2</sup> John Maynard Keynes, an advisor to the British Treasury

<sup>3</sup> Harry Dexter White, Special Assistant to the U.S. Secretary of the Treasury

<sup>4</sup> Bretton Woods Agreement of 1944 is a multilateral agreement entered by allied nations of the World War II, excluding Soviet Union which declined to be a party to the agreement

## **FLEXIBLE EXCHANGE RATE SYSTEM EMERGED**

A landmark paper titled “A Theory of Optimum Currency Areas”, published in 1961, set the initial theoretical basis for the United States to unilaterally jettison the Bretton Woods System in 1971 and also to adopt the common currency by the European Union by the year 1999. The author of the said paper Robert Mundell<sup>5</sup>, with reference to balance-of-payment said that “...fixed exchange rates and rigid wage and price levels prevent the terms of trade from fulfilling a natural role in the adjustment process.” The natural adjustment process he meant is that, a system of flexible exchange rates is considered as a device “whereby depreciation can take the place of unemployment when the external balance is in deficit, and appreciation can replace inflation when it is in surplus.” In a fixed exchange rate system, the said natural adjustment does not take place. Since, he insisted that the fixed exchange rate system has created an “international disequilibrium system.” In a way, this exercise could be considered as the reemphasizing of pure market forces and the supply-side of the economy.

Mundell, at the very beginning of the above mentioned paper insisted that, “It is patently obvious that periodic balance-of-payment crises will remain an integral feature of the international economic system as long as fixed exchange rates and wage and price levels prevents the terms of trade from fulfilling a natural role in the adjustment process.”

To get rid of the said “international disequilibrium system” allowing the terms of trade for fulfilling a natural role in the adjustment of balance-of-payment transforming the “disequilibrium system” into a system of natural equilibrium, Mundell advocated two systems.

A system of national currencies connected by flexible exchange rates,

A common currency for some regions with having elastic supply for inter-regional payments and connected to a flexible exchange rate system for international payments.

Both systems adopted subsequently. On August 15, 1971, President Richard Nixon addressing the nation, declared to end the fixed exchange rates system which had been established under the Bretton Woods System. Accordingly, the world adopted flexible exchange rates connected to national currencies. Thereafter, this has been the IMF’s official policy in supporting countries which are having balance-of-payment issues.

The second proposition about a common currency was subsequently adopted by the European Union creating the world’s largest economy, and establishing a totally new

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<sup>5</sup> Robert Mundell received the Nobel Memorial Prize in Economic Sciences in 1999 for his pioneering work in monetary dynamics and optimum currency areas

currency called Euro for inter-regional payments which reduced transaction cost within Euro area while adopting a flexible exchange rate system for international payments.

### **DEBT CRISES BEGIN IN FLEXIBLE EXCHANGE RATE SYSTEMS**

Like the post-World War II fixed exchange rate system, for a certain time period flexible exchange rate system worked well, say, until the Great Recession of 2008. Similarly, the system of common currency adopted by the European union seemed to have worked well until when the troubles appeared in 2008, even before the ten years of adopting the common currency, the Euro.

Yet, still, both systems namely, flexible exchange rate system and common currency of EU continue to provide for international payment system and for inter-regional payment system in the case of Euro area.

Both above alternatives have been proposed to eliminate what had become an “international disequilibrium system” under the fixed exchange rate system created by Bretton Woods System. Yet what occurred in 2008 – 2009, during the Great Recession, has shown that “alternatives” did not put the “disequilibrium system” into an equilibrium system. The world is struggling being unable to use physical capacity of production for the production of goods and services for the wellbeing of citizens of every country. Shrinking economies, high unemployment, reduction of global trade and investment volumes and poor performance of the capital markets were some of the major features of the crisis. This time the apparent problem is overwhelming debt in the EU and in the United States. In other words, the crisis is a debt crisis. Interestingly, again the culprit is the “international disequilibrium system” but the cause is not Fixed Exchange rate system, instead to many economists, the cause is “savings glut.”

### **GLOBAL SAVINGS GLUT (GSG) HYPOTHESIS**

This is a novel hypothesis that has been used to explain the Great Recession triggered in the U.S. and EU almost simultaneously. This is the hypothesis, used by Ben Bernanke (the then Chairman of Federal Reserve) for the first time in 2005 to explain increasing debt burden in the U.S. economy. Competing theory is the Larry Summers’<sup>6</sup> Secular Stagnation Hypothesis which will not be discussed here as it is beyond the scope of this short essay.

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<sup>6</sup> Larry Summers is a Professor at Harvard University, has published an article in February issue of Foreign Affairs titled “The Age of Secular Stagnation: What It Is and What to Do About It,” The article explores how expansionary fiscal policy by the U.S. government can help overcome secular stagnation problems and get growth back on track.

By the year 2005, Ben Bernanke identifies two reasons for the increasing debt burden in the U.S. One is continuing long term low interest rate and the second is the ever-increasing current account deficit. Interestingly, according to him, both issues were caused by the Global Savings Glut. How did it happen?

First, take the issue of current account deficit. The current account deficit of the U.S. had been increasing as a chronic economic problem. He argues, “In the first three quarters of 2004, the U.S. external deficit stood at \$635 billion at an annual rate, or about 5-1/2 percent of the U.S. gross domestic product (GDP). Corresponding to that deficit, U.S. citizens, businesses, and governments on net had to raise \$635 billion on international capital markets.” Such borrowings increase domestic debt burden.

However, in turn, when the interest rates are low, households and businesses sans government tend to borrow more and as a result such borrowings tend to increase imports while contributing to increase current account deficit further.

Then, the solution would have been to increase both long term and short-term interest rates. In the event, domestic borrowing from businesses and citizens would be less by reducing the external deficit. Ben Bernanke, the incumbent Chairman of the Federal Reserve, was not pursuing that policy. He says that he did want to do it but he could not do it. Why did he fail? Global Savings Glut was the excuse! He argues that, “my conclusion was that a global excess of desired saving over desired investment, emanating in large part from China and other Asian emerging market economies and oil producers like Saudi Arabia, was a major reason for low global interest rates. I argued that the flow of global savings into the United States helped to explain the “conundrum” (to use Alan Greenspan’s term) of persistently low longer-term interest rates in the mid-2000’s while the Fed was raising short-term rates. Strong capital inflows also pushed up the value of the dollar and helped create the very large US trade deficit of the time, nearly 6 percent of US gross domestic product in 2006” (Bernanke, April 2015).

Main argument of GSG can be explained as follows.

If a country invests more than it saves, then that country should have a current account deficit. Also, in that case the country would have a surplus on its financial account as the balance-of-payments account must balance. Surplus in the financial account means that the inflow of funds exceeds outflow. In other words, if a country invests more than it saves, that country would have a deficit in the current account and a surplus in the financial account.

Investment > Savings = Current Account Deficit

On the contrary, if a country saves more than it invests, then that country would have a surplus in the current account and a deficit in the financial account.

Savings > Investment = Current Account Surplus

So that the country saves more than it invests would have a savings glut and that country can lend more to the savings deficient countries like the United States. Such flow of funds, prevents the Federal Reserve from increasing interest rates to curb the credit (debt) growth in the United States. With this argument Federal Reserve effectively attempted to negate the blame thrown by many economists that the Federal Reserve which kept the rates too low for a period too long than necessary must be blamed for the 2008 credit crisis and for the Great Recession. If the FED increased the rate, there would have been more inflows of more funds into the country and thereby deteriorating the adverse situation further. The low interest rates, however, encouraged households and corporate sector to borrow more as the cost of borrowings were low.

However, from what is called pragmatic approach, the United States had been demanding especially from China to appreciate its currency Renminbi (which is commonly known as yuan) or to allow its currency to show the “true” value. The U.S. observed that the yuan was continued to be undervalued. In other words, China’s alleged policy was to fix its currency to the U.S. dollar, restraining prices going up of Chinese products in the world market, especially in the US market in addition to the inflation in the domestic market. It appears that China has been preventing externally influenced inflation. But the U.S. considered, such Chinese policy had created a situation in the U.S. to decline output and employment for which situation president Donald Trump<sup>7</sup> responded by imposing high tariff for goods from Chinese origin. This kind of situation has been explained by Robert Mundell as far back as 1961 by the same paper mentioned above.

He insisted that, “The policy of surplus countries in restraining prices therefore, imparts a recessive tendency to the world economy on fixed exchange rates or (more generally) to a currency area with many separate currencies.” To illustrate this problem Robert Mundell used a simple model of two countries; country A and B.

Assume that initially in both countries there is full employment and equilibrium in balance-of-payments. Assume that both have national currencies; money wages and prices cannot be reduced in the short run without causing unemployment and monetary authorities act to prevent inflation (as is being done by China). Now, this equilibrium is disturbed by a shift of demand for goods from B to A. In other words, A is exporting to B now. The shift of demand from B to A causes unemployment in B and inflationary pressure in A. This disequilibrium resulted from the shift of demand will be adjusted to relieve B to the extent that prices are allowed to rise in A. But if the monetary authorities

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<sup>7</sup> Donald Trump is the 45<sup>th</sup> President of the U.S. He said, “From now on, we expect trading relationships to be fair and to be reciprocal.” May 29, 2018, President’s Briefings, whitehouse.gov.

in the country A prevents the prices from rising all the burden of adjustment is thrust onto country B causing a reduction in B's real income as this cannot be rectified by a change in the terms of trade because B cannot lower wages out of concerns for political imperatives and A will not raise prices – then it might have resulted by a decline in B's output and employment. Presumably, this might have been the thinking behind president Trumps trade war with trading partners.

However, Mundell's above explanation will too, strengthen the argument that excessive savings would create excessive debt in the United States as trading partners' monetary policies prevent the natural adjustment process in terms of trade.

### **GLOBAL SAVINGS GLUT IN A SYSTEM WITH ELASTIC MONEY SUPPLY**

The Global Savings Glut Theory of Ben Bernanke became the official theory that attempted to explain the system-wide debt crisis occurred during the Great Recession of 2008 -2009. They blamed the global imbalance, savings in the eastern countries like China, Japan, South Korea, Taiwan and Saudi Arabia in the middle east. Some economists reject this notion. Particularly, economists of Austrian School criticize GSG because GSG has not accounted the money created in the financial system under the Fractional Reserve System, as such, it is not purely the savings that created the overwhelming debt crisis; an argument that cannot be simply ignored.

### **DEBT CRISES AND LOOMING DEBT CRISES IN COUNTRIES WITH HIGH SAVINGS**

Ben Bernanke questions, “Why is the United States, being the world's largest economy, borrowing heavily on international capital markets--rather than lending, as would seem more natural?” (Bernanke, 2005). The answer derived from the GSG theory is the unavoidable current account deficit. Further, the same current account deficit led the U.S. citizens, businesses and the government to be heavily indebted being unable to increase interest rates in curbing heavy credit growth. Then, vice versa too, must be true. In other words, if a country has a continuing surplus in the current account, that country's citizens, businesses and the government would have been free from heavy indebtedness. Data show the exact opposite of it. Those countries which have current account surpluses have accumulated heavy debts in their economies. Two notable examples are the Japan and China.

By Q2 of 2019, Japan's Total Credit to Non-Financial Sector stood at 379.6% of GDP, in China corresponding figure was 261.5% of GDP. For comparison the corresponding figure for the U.S. was 249.7%. (Data source: Bank of International Settlement).

Both China and Japan post surpluses in the current account and the U.S. has external deficit. Credit (debt) soars in all. What is this “conundrum?”

### **UNDERSTANDING THE REAL PROBLEM THROUGH THE SOLUTION APPLIED**

During the Great Recession, the United States used a new policy tool in order to rescue collapsing banks in resolving the debt crisis and to spur growth. That policy device is known as “Quantitative Easing (QE).” During the said recession Federal Reserve dramatically reduced the rate of interests anticipating that citizens and businesses would borrow as credit was so cheap but that did not happen. Simultaneously, fiscal policy kicked in by reducing taxes with a hope that investment and consumption would recover. Unfortunately, economy did not produce results expected. So, Federal Reserve opted to use “Quantitative Easing” in expanding its liabilities by increasing liquidity in the financial system until the economy is turned around and that policy ended in October 2014. Accordingly, QE was the chosen policy by the U.S., which is a current account deficient country, in resolving a severe debt crisis.

Japan was and is a current account surplus country but began to show difficulties starting from early 1990s. As in the case of the U.S. Japanese monetary authorities brought down the interest rates but economic slowdown continued. Japanese rate of interest for the next two decades had been near zero, however, rates can never be brought down more than zero. Then, Japan began QE, becoming the pioneer in using this policy which was the same policy later experimented by U.S. during the Great Recession.

Accordingly, the same solution was used by a large economy which had current account deficit and another large economy which had been posting surpluses in the current account. Through the solution used, it may be concluded that crises in both countries had the same cause. In fact, the root cause of the crises was same, being the cause was overwhelming debt in the system. It can be argued that Japan virtually created fixed exchange rate system with the U.S. preventing “the terms of trade fulfilling a natural role in the adjustment process” thus creating a disequilibrium with having the benefit of disequilibrium for Japan. Yet, Japan suffered from a bigger debt crisis before the U.S. and expanded the balance sheet of its central bank much faster than any nation; and Japan continue to be a current account surplus country. How this conundrum be explained? Income inequality in Japan is a proposition put forward to explain it, but it is not a sound theory.

## **ANOTHER DIMENSION OF DEBT CRISES: ECONOMIC SYSTEM GAP THEORY**

A paper titled “Economic System Gap Theory” was presented at the Cambridge Business and Economic Conference held in July 2018 in Cambridge, U.K. This piece of theory explains that the international economic system is predominantly a disequilibrium system because by design the system is required to live beyond its monetary means even if distributable income is distributed evenly. So, this dynamic will not change even if the savings glut is prevented by all central banks agreeing upon to cooperate allowing terms of trade to fulfill a natural role in the balance of payment adjustment process transforming the international disequilibrium system into an international equilibrium system in regard to balance of payment.

Consider a system where the value of output purchased is much more than the income. This is the situation that defined as “living beyond means” and is a disequilibrium system. Then, it can be argued that the purchased output can be reduced to match the income. This can never be done in the contemporary global economic system, according to the theory. This difference between total expenditure and income is called a “systemic gap” hence this theory is called as “Economic System Gap Theory.” The said disequilibrium can be put into equilibrium only by creating debt exceeding savings, that led to accumulate overwhelming debt as a result.

Hence, the theory concludes that, “After a period of economic activity, it does not need necessarily be a period of economic growth, if private consumers are not in significant debt, then the government could be filling something defined ... as “Economic System Gap” from a large amount of debt out of which a significant component cannot be paid back – and if both private consumer and the government are not in significant debt, then the “Economic System Gap” is being filled from income derived from stock and derivative markets, which means there should be a bubble in the stock market with heavy indebtedness of holders of stocks and derivatives. If none of the above is happening, then it must be an (immature) economy that is expanding by reinvesting the expanded capital and producer credit and mostly producing goods and services that do not satisfy the demand of immediate consumption. In all former scenarios except the last, the economic system may crash soon due to “over-indebtedness”, if systemic partial debt-deflation is not undertaken by design. In the latter case, the economy will fall into any one of the former scenarios as it grows. The only other two possibilities for an economy to avoid a (systemic) debt crisis is that it enjoys large non-credit based foreign reserve surpluses, or that over-indebtedness is resolved from time to time by accidental reflation. This is the general behavior of contemporary capitalist system explained by the economic system gap theory.”

Accordingly, the above mentioned disequilibrium is a disequilibrium that can never be corrected by preventing “savings glut” through adopting a flexible exchange rate system allowing the terms of trade fulfilling a natural role in the adjustment of balance of payment process or by replacing the natural adjustment process imposing tariff against the countries which have current account surpluses that do not allow the natural adjustment process.

## **CONCLUDING REMARKS**

The world needs to resolve this conundrum pointed out above, theoretically and in practice. The existing global physical capacity to produce goods and services sustainably is enormous and also can presume that the physical ability to increase the productive power is immense. But both have been prevented continuously, especially since the Great Recession. This is a similar situation that existed just prior to the end of World War II. The world had the capacity to produce but was not producing. Economic thinkers who gathered in Bretton Woods in 1944 issued a “Joint Statement by Experts” which addressed the requirement of credible international payment system –And the problem was resolved by signing the Bretton Woods Agreement. By that time the agreement was timely.

The demise of the fixed exchange rate created by the Bretton Woods System in 1971 provided better space for central banks of sovereign nations to incorporate under a more progressive flexible exchange rate system and as a result the global production continued to increase for the benefit of global citizens.

However, now the world is experiencing a similar situation just prior the end of World War II, being unable the international system to support global production, then due to lack of more flexible international payment system and this time due to debt crises. The world might need another “Joint Statement by Experts” that would address the issue properly as the current tariff war covered under petty patriotism cannot resolve the said international disequilibrium.

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