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After Bretton Woods II

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June, 2008

Abstract

In this paper we review the key facts in the history of the International Monetary System in the 20th century to analyze the stability of what some authors have called "Bretton Woods II", which describes the current fixed-exchange rate and export-led growth model of some Asian countries, including China. Our analysis shows that despite some important resemblances, there are also major differences that may be misleading between the current system and the one in the 50s and 60s. What data tells is sometimes different to the "conventional wisdom" in the issue, especially regarding the role of China in the U.S. trade deficit in merchandise. The current system seems to be stable as long as the United States decides to continue playing its role as center country, anchoring inflation expectations. Additionally, we explore what would happen were the current system to collapse. We dismiss the possibility of the Yen or Yuan becoming the center currency in an Asian Monetary Union similar to the European EMU in the 80s and conclude that were the current system to finish, its fall would be follow by an increase in exchange rate volatility and inflation. In this case, the Euro could take the baton as new international money, something that is quite improbable otherwise.

Keywords: Dollar standard, optimal currency areas, exchange rates.

* This paper was prepared for the International Conference of Commercial Banks Economists in Melbourne, June 2008. The contact address is Banco Bilbao Vizcaya Argentaria Castellana 81, 7th floor. The views expressed here are those of the authors and do not necessarily reflect the position of BBVA.

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1. Introduction

The demise of the post-war Bretton Woods agreement in the 70s marked the beginning of a period of exchange rate volatility, inflation, low growth, trade conflicts and crises of more than two decades. The creation of a European common currency or some of the currency crises in emerging countries can be regarded as consequences of the end of the system of fixed exchange rates than the post-war economists devised to avoid the terrible actions of the 30s.

The collapse of Bretton Woods also introduced most developed countries with the reality of floating currencies. For the first time in history, most of the national moneys were not (at least nominally) backed by a commodity such as gold or silver, but their value was just due to the confidence on its value. This new reality also highlighted the importance of this confidence to be corresponded by anti-inflationary reputation of the Monetary Policy Authorities (the Central bank). These lessons were learned painfully during the Great Inflation years in the 70s and early 80s.

For developing countries, the learning process was even more difficult. The attempt of most Asian countries to keep their dollar pegs while borrowing extensively in dollars produced the Asian crisis in the late 90s and its contagion to other countries in Latin America and Russia. Bowed to not repeat the same mistakes, the beginning of the century showed how most of the traditional international borrowers began accumulating large stocks of international reserves that could provide them with a buffer against speculative attacks and a serious commitment to their pegs (now in many cases disguised as "managed floats").

Some authors have seen in this new reality a replay of the so successful Bretton Woods agreement, with developing countries playing the same role than Europeans played in the 60s. The comparison is quite interesting, though flawed in some aspects, as we will comment here. But no matter if the current system is an exact replica of Bretton Woods or not, the system is under severe strain due to what has been called as "Global Imbalances". This term defines the reality of a major current account deficit in the U.S. and simultaneously (which does not mean necessarily consequence of) large surpluses in Asian and oil producing countries. This has raised voices of concern, especially among protectionist policymakers at Washington D.C. Many countries are beginning to reconsider the current deal and introducing more exchange rate flexibility, at pace too slow for some economists and too fast for others.

Is the current international monetary system sustainable? For how long? Which events may bring it to its end? How can it collapse? To what? These questions are essential to understand the medium term economic perspectives for the world economy. In this paper we do not provide a full answer to them, but we explore, in the light of the data, the historical evidence, and the construction of scenarios, some of their partial answers. Honestly, we believe this is the most anyone can do at the present.

In section 2, we introduce the definition of Bretton Woods II that have been proposed by Dooley, Folkerts-Landau and Garber (2005), though quite appealing , their proposal faces severe criticism that we also summarize. In section 3 we review the history of the International Monetary System in the 20th century to find analogies and draw conclusions about the risks to the current system. In Section 4 we employ data in trade and exchange rates to demise some of the conventional wisdom about the U.S. current account deficit. In section 5 we apply the previous knowledge to state the hypothesis that the current situation may still survive for a while, as long as neither protectionism nor inflation rises in the U.S. (and this may prove to be a big if). Finally, in section 6 we consider what would happen if the dollar would lose its central role as international currency, leading to a period of exchange rate volatility and instability. This would open the doors of a world of floating currencies, where only the Euro (if any) could take the baton as currency of invoice and deposit of value for international reserves. In section 7 we finally conclude this interesting trip to the past and the future.

2. What is Bretton Woods II?

2.1. A brief description

In a series of influential papers, Dooley, Folkerts-Landau and Garber (henceforth DFG) have proposed the existence if a new economic system popularized as "Bretton Woods II", what comes to be as a consequence of the emergence of China and other Asian countries as major players in world markets (see for example DFG, 2005, 2007). According to DFG, China and other Asian countries have embarked in an export-led strategy similar to the one followed by Japan in the post-war years. To sustain this strategy they may rely on a huge mass of underemployed rural population but they need to attract Foreign Direct Investment (FDI) flows, which provide them with the necessary technology and managerial skills to compete internationally.

The economic strategy to sustain this process is based on the build-up of official reserves in the form of dollar-denominated assets. The goal of these reserves is to constitute valid collateral as no other enforcement mechanisms is available to foreign investors to guarantee that the developing country will not default or nationalize the new industries that are created. The only way to accumulate these reserves is to run a current account surplus, so that the net inflow of foreign exchange is positive. To do so, emerging countries should peg their currencies to the U.S. dollar at an undervalued rate, backed by a surplus of aggregate savings over aggregate investments. To avoid importing the monetary policy of the United States due to the "Impossible Trinity"[2], some countries may impose capital controls and sterilize the dollar inflows from their monetary bases. Something relatively easy in economies under heavy government intervention and limited openness to imports and underdeveloped financial markets.

Accumulated reserves are invested in U.S. securities for two reasons. Firstly, to obtain a yield, allowing the U.S. financial system to invest these resources again in the developing countries in a more efficient way than their underdeveloped financial systems would do. Secondly, because they have accumulated so much U.S. dollar-denominated assets that they have a stake in preserving the value of the dollar. When those involved in this game were small players, such as Korea, Taiwan, or Singapore, there were no global consequences and they were able to get away with it, even though there were grumblings about unfair competition and occasional protectionist threats from the U.S.. The fact that

all the countries named above are seen as close political allies of the U.S. helped too. When a large player like China enters into the game the situation changes and some global macroeconomic consequences arise. The most significant is the impact in financial markets, since the "savings glut" of China (simultaneously with the big surplus of oil producing countries, a somewhat related phenomenon given the impact of Chinese growth in energy markets) was to depress long-term yields.

A result of this process is that somebody should run a counterbalancing current account deficit. Since surplus countries demand US securities to invest their reserves, at the end is the US the country which has to run that deficit. According to DFG the American deficit is thus consequence of the natural working of the system and not an "imbalance" that should be corrected in the short-term. The possibility of running big trade deficits in its own currency is the privilege of the United States due to its central role as the world central bank, the country that issues the only accepted international money.

As countries develop, they may progressively switch from external to internal demand, thus becoming less dependent on foreign investments and exports, so they "graduate" progressively from this fixed-rate system, increasing their exchange rate flexibility and eventually floating. Nevertheless, as the number of large potential emerging markets is high, and the "graduation process" slow, it would be natural to expect this system to last still some decades.

Therefore, according to DFG, the current system of exchange rates is just a new ad-hoc version of the post-war Bretton Woods agreement where Asian countries (especially China) play the role of Western Europe and Japan in the 50s and 60s.

2.2. Criticisms

Several authors have criticized the thesis of DFG. Roubini (2007) resumes most of them::

1. There is no evidence, neither theoretical no empirical, to support the statement that foreign reserves constitute a valid collateral in the case of default risk or similar. According to Roubini, nationalizations in the 60s and 70s or recent experiences in countries such as Russia, Bolivia or Venezuela have implied an expropriation of FDI and the U.S has not taken any action to seize the foreign reserves of these countries.

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2 It refers to the fact that is not possible to have an open economy free of capital controls, a fixed exchange rate and an independent monetary policy.

2. The role of the U.S. as a financial intermediary is not clear at all in countries such as China. First, because FDI flows are too low when compared to total investment (around 5-6% of total investment). Second, because most of FDI flows come from Japan and Europe, and not from the U.S. itself[3] .

3. Many countries are leaving their pegs to the dollar. Roubini affirms that countries such as South Korea, Thailand, Indonesia, the Philippines, Russia and India have recently allowed more exchange rate flexibility and some upward appreciation. A possible reason for this appreciation would be the loosening of the monetary policy in the U.S. that might lead either to inflationary pressures or to prevent the build up asset price bubbles in countries that retain the peg.

4. The sustainability of the U.S. current account could not be guaranteed without a considerable depreciation of the dollar. According to his own calculations, Roubini states that if the U.S. trade deficit stays around 6% of GDP, the U.S. external debt will rise from around 23% of U.S GDP in 2006 to something like 75% in 2013. BW II debt dynamics would self-sustain the current account deficit above 6% even if the trade deficit stabilizes. Such a high share of the U.S. economy in the hands of foreigners is difficult to conceive for political reasons. Therefore, the author considers that the pressure to depreciate the dollar may be stronger than in the soft-landing "graduation" proposal of DFG.

A more subtle and provocative criticism is provided by McKinnon (2007). He criticizes the concept of undervaluation as if there was a right equilibrium exchange rate that could be considered a reference. In the light of the Japanese experience he states that exchange rate has little or no predictive power for the net trade balance, which is dominated by saving-investment imbalances in the U.S compared to its periphery. The conception that fixed-exchange rates are a tool to achieve trade surpluses is consequently misleading, tough quite extended among the economics profession.

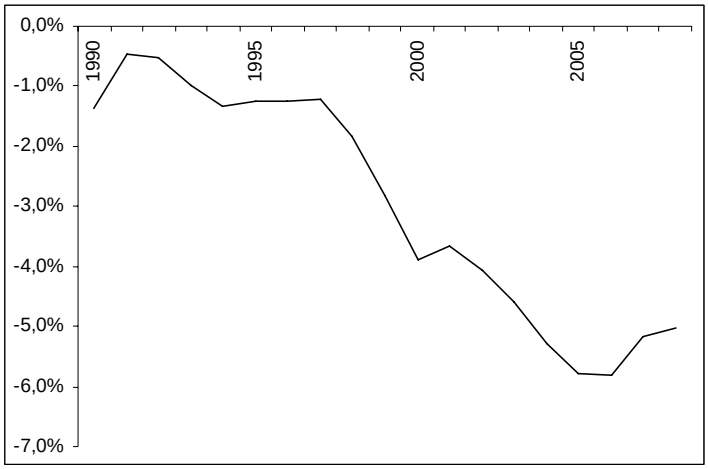
What then motivates emerging markets to peg? According to McKinnon, the main goal of fixed-exchange rates is to provide a nominal anchor for domestic price levels. Additionally it eliminates currency risk, which enhances export-oriented policies. Under this explanation the high competitiveness of Asian economies stems from their high savings ratios, especially when compared to the US. The fact that they accumulate US dollar-denominated securities is just a consequence of the dollar being the internationally accepted currency.

[3] In fact, China receives over 60% of its FDI from Hong Kong and Taiwan.

Even though the DFG thesis has considerable merit, and there is a significant probability of a soft landing scenario, in which the U.S. economy increases savings while China expands consumption, allowing for an orderly graduation towards managed floating, there is little doubt that risks of a breakdown of this dynamic equilibrium have risen in the last few years. History shows that monetary systems breakdown when confidence in the stability of the anchor currency fails, or, somewhat related to it, when fears of inflation in the anchor country arise. Worries about public debt sustainability have been eroding confidence in the stability of the US dollar for some years now, aggravated for extensive commitments in foreign conflicts as well as an ambitious local agenda, coupled with the traditional reluctance to raise taxes to pay for it. Of more recent date, is the concern about the health of the financial system and the aggressiveness of the Fed to inject liquidity at a time of rising commodity prices. Higher inflation is a reality now in the Developing World as well as in many Developed Countries, and the key question is if this is a transitory phenomenon or a more permanent one. If the Fed fails to reign in inflationary pressures in the US, this could eventually lead to a breakdown of the current monetary system.

Before going into how the new system might look, in the event of a collapse of BW II, we try to explore what history may tell us about the evolution of the current situation, and which potential scenarios might arise in the coming years.

Figure 1. Net exports of goods and services in percentage of the GDP. Source: National Accounts (AMECO)



3. Lessons from history. What happens after the collapse of the international monetary system?

3.1. Evolution of the International Monetary System

The Monetary System is defined as "*… the mechanisms governing the interactions between trading nations, and in particular the money and credit instruments of national communities in foreign exchange, capital, and commodity markets. …* " (McKinnon, 1993). In the last century and a half, it has been governed, explicetely or implicetily, by different sets of rules that go from the Gold Standard of the late 19th Century to the current "No System" as has been called by some authors.

Each "system" has been a consequence of the politics and economics of its time, and each collapse has been usually due to a change in the political and economic incentives of the agents, as shown in Table 1. Therefore, it is important to undersand how previous systems collapsed to draw some conclusions about the stability of the current situation. In this section we review two of the most important episodies in the history, the collapse of the Gold Standard in the 30s and, even more siginificative to the current situation, the end of the Bretton Woods system in the 70s.

Table 1. Evolution of the international monetary system

Period	Monetary System	Key Challenges	Assessment	Causes of the Transition to the Next Period
1999-2008	No-System (Bretton Woods II)	Global Imbalances	Some emerging economies (particularly China) peg their exchange rates to the USD. Expansionary domestic policies in the U.S. (or saving gluts in Asia) provoke large current account deficits in the U.S.	Protectionism? Financial shock? Asian Monetary Union? Euro as International Money?
1985-1998	No-System (Currency Crises)	Crises in Emerging Economies	Emerging economies in Latin America and East Asia suffer currency crises due to the combination of fixed exchange rates and expansionary domestic policies and/or Original Sin (debt denominated in USD)	Emerging countries switch to floating regimes or begin to cumulate dollar reserves as a buffer against future shocks
1973-1984	No-System (Floating-rate Dollar Standard)	Inflation	Unsuccessful attempts to combine independent domestic policies (monetary and fiscal) with a managed float of the exchange rate.	De-facto decoupling of interest rates between the Euro zone and Europe (free floating).
1950-1970	Bretton Woods	Price Stability	Fixed peg to the dollar (nominally pegged to the gold) that provided price stability. Monetary policy could be independent as long as there existed capital controls.	Excessive profligacy by the U.S. to support their military and social programs conflicted with periphery countries anti-inflationary efforts.
1918-1939	Interwar Instability	Price Stability	Early attempts to reinstitute the Gold Standard that failed with the Great Depression and concluded in Beggar-thy-Neighbor policies.	Conflict between expansionary policies against the depression and deflationary policies to keep parity
1880-1939	Gold Standard	Price Stability	Fixed peg to the gold that provided price stability but not independent monetary policy	World War I. The expansion of the democratic franchise, which made more difficult for governments to rector to deflationary policies to keep exchange rate parity

3.1. The Gold Standard, 1880-1931

The end of the Napoleonic Wars and the Pax Britannica brought about a period of significant increases in prosperity in Europe and the Americas, with the spread of the Industrial Revolution, on one hand, and the expansion of international trade and capital flows. Even though at the beginning of the period bi-metalism prevailed, by 1880 almost all major countries had adopted the Gold Standard, with the pound as the anchor of the system, with Central Banks in the UK, France, and to lesser extent Germany, keeping large reserves of gold, while most countries maintained their own international reserves in pounds, francs, marks and to a lesser extent, in gold. The working of the system was as follows:

- The role of central banks was to maintain gold parity of their domestic currencies, therefore setting interest rates to avoid large inflows or outflows of gold. In the case of

short-term liquidity crisis, central banks could lend freely at a higher interest rate (Bagehot's rule).

-The world price level was an endogenous function of the supply and demand of gold. During the late 19th century, many countries had to deflate their price levels to keep the parities.

The system worked with remarkable success up to the start of WWI, with international capital flows even higher than now, thanks in part to the confidence in currencies, meaning that they funded transitory deficits, instead of flying away, scared of a devaluation of the countries running the deficits. The commitment of monetary policy was not in doubt under such an automatic system.

Even though the automatic adjustment mechanisms under the gold standard worked, they usually took a long time, even though there was considerable wage flexibility and very little impediments to fire or hire workers. The system was not generally questioned, so the credibility of monetary authorities (when they existed) was taken for granted. Eichengreen and Sussman (2000) even say that the limited access to the political franchise, absence of active fiscal spending to satisfy the demands of the poor, and the absence of organized labor were major factors to make overall economic policy consistent and supportive of the gold standard, at least in Europe and the US.

WWI put an end to this period, with Central Banks scrambling for gold and using fiat money to finance war expenses. The return to a so-called "Managed Gold Standard" after the war proved a failure, as governments took a more aggressive fiscal stance to alleviate unemployment and resorted to devaluations when under pressure from mounting current account deficits, like in Britain in 1931. On the other hand, The US Federal Reserve Bank usually took pro - cyclical policies in the twenties and thirties (Eichengreen and Sussman, 2000; Mundell, 2001) aggravating the problems. The Managed Gold Standard finally collapsed in the 30s, as country after country began to adjust their currencies, raise trade barriers and limit capital flows as they fell into recession and political turmoil. What emerged in the brief interlude between the Great depression and WWI was a mixed system, with at least 4 components:

- 1. The British Empire and its direct sphere of influence, anchored in the pound sterling with preferential trade and capital mobility within this group;

- 2. A Managed Gold Standard in Central Europe, with France at its center, and several Central European countries around it;

- 3. A number of countries following discretional policies, including active trade and capital flow barriers and exchange rate policies, including multiple rates, such as Germany and many developing countries.

- 4. The US remained under the Gold Standard but for a brief period, and as fear of war in Europe arose in the late 30s, it began to attract a lot of gold inflows. By the end of the WWII, most of the gold reserves were in the US.

One important feature of this period is that inflation remained low, even though countries were under severe social pressures. The traumatic experience of the 20s when most countries underwent very high inflation and even hyperinflation, left lasting memories in policy-makers, to prevent fiscal and monetary excesses, even after they gained autonomy in monetary policy.

The collapse of the Gold Standard as a result of a major global conflict leaves very few lessons: very few international institutions survived such a trauma. In this sense the post war experience is more instructive:

- When credibility becomes an issue, capital flows become less predictable and might play a destabilizing role.

- Democratization limits the autonomy of both, fiscal and monetary policy, making harder to achieve consistency between them, forcing countries to use devaluation - inflation to gain additional instruments.

- Traumatic experiences help achieve political support for consistent policies. The best example is the German attitude towards inflation, but is not the only one. We have seen similar reactions in Latin America in the last two decades.

- When the system broke down in the 30s, several blocks emerged, and trade and capital flows suffered from defensive policies. This might have been just one contributing factor (at least rising nationalism played a role too) but the end result was a major setback for globalization (Williamson, 2002).

3.2. The Bretton Woods Agreement, 1950-1970.

The Rules of the Game

Although this is not the place to provide an exhaustive explanation of the working of the world monetary system in the post-war era, we consider important to provide some details to understand its similarities and differences with the current system[4]. In essence,

[4] For a detail description, see McKinnon (1993) or Eichengreen (1996).

this was an asymmetric system with the dollar at its center and the rest of currencies at the periphery.

The role of the United States was to provide the only accepted international money to the rest of the countries. To do so, it had to follow a certain set of rules. These rules were, in the best case, an interpretation of the original spirit of the 1945 agreement, but deviation from them meant in the end the collapse of the system. The first rule was to anchor the dollar price level for tradable goods by an independent chosen American monetary policy. The second rule was to "benign neglect", i.e., to remain passive in the foreign exchange market without any balance-of-payments or exchange rate target, allowing free access to foreigners to U.S. capital markets. The third rule was to practice free trade (under the current GATT legislation) maintaining a position as a net international creditor in dollar-denominated assets.

The rest of industrial countries in the BW agreement should follow a different set of rules. The first rule was to peg their exchange rates to the dollar, allowing free currency convertibility for current account payments. The second rule was to subordinate their monetary policy to that of the United States in order to have the same inflation rate in tradable goods that the central economy. The third rule was to limit current account imbalances by targeting fiscal policy to this goal. Therefore, countries tried to run current account surpluses that accumulated in the form of official exchange reserves in U.S. Treasury Bonds.

Although nominally constrained by the necessity to keep the dollar price of gold constant, the U.S. was able to conduct an independent monetary policy thus setting its inflation rate. The rest of the countries subordinated their monetary policies to keep track of the U.S. price level in order to avoid pressure on their exchange rates. To avoid current account imbalances, follower countries should roughly keep aggregate investment equal to savings. The way the countries chose to do so was to employ their fiscal policies to offset divergences between private saving and investments. Finally, periphery countries accumulated soft buffers of dollar reserves to ease transactions and interventions.

Why did the system break down in 1971

Why did the Bretton Wood agreement broke down in 1971? The original sin was U.S. fiscal profligacy in the 60s to support the Vietnam War effort and the 'Great Society' social programs. At the same time, the Federal Reserve began to deviate from its

commitment to price stability by allowing inflation to grow, in some cases even faster than in European countries (see Figure 2).

Despite the attempts by American policymakers to avoid the pressure on its gold reserves, such as the Interest Equalization Tax of 1964 or the voluntary restraints on lending abroad by commercial banks of 1965, it was necessary to implement international coordination via the Gold Pool to prevent the U.S. to run out of its gold reserves. However, this strategy addressed the symptoms, but not the causes, which in the end was the deviation of the U.S. dollar from its role as a nominal price anchor and the unwillingness of other industrialized countries, especially Germany, to import U.S. inflation. In the original Bretton Woods spirit, this might have been avoided via capital controls, but in the reality of 1971, on-going liberalization of capital markets made controls quite inefficient.

The rise of inflation above the level of other industrialized nations began to harm the performance of the American economy in the late 60s. The Nixon administration was concerned about the rising trade deficit (see Figure 3) and became convinced of a depreciation of the dollar against the deutsche mark and the Japanese yen to make American exports more competitive.

The lower tolerance to inflation of German authorities produced in the spring of 1971 massive flows from the dollar to the mark. Germany, fearing inflation, halted intervention and allowed the mark to appreciate. Other countries had to follow to prevent "hot money" inflows. Finally, in the summer of 1971 the Nixon administration, worried by the situation, closed the gold window and imposed a 10 percent surcharge on merchandise imports to pressure other countries into revalue. This was the end of the system.

Figure 2. U.S. and Germany CPI rates of change. Source: National Accounts (AMECO).

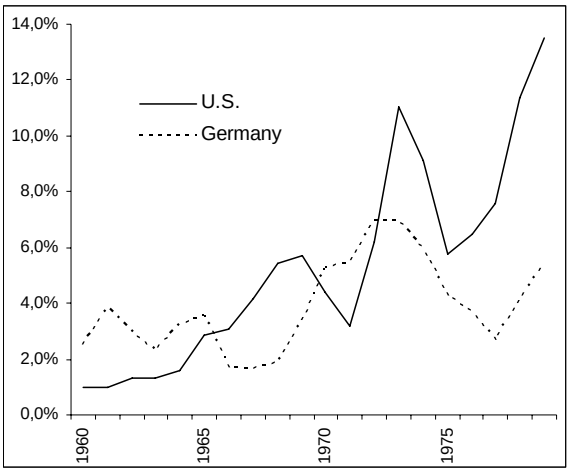
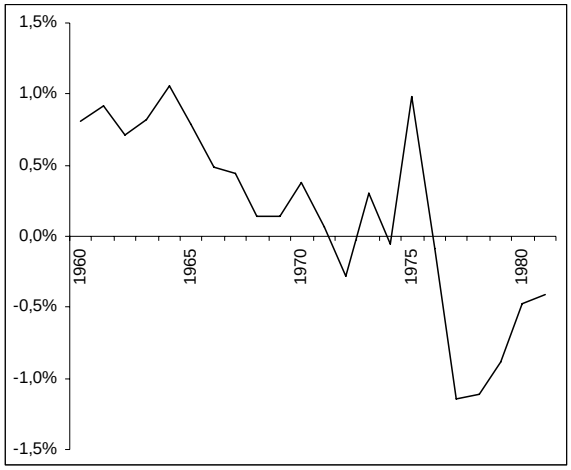


Figure 3. U.S. Net exports of goods and services in percentage of the GDP. Source: National Accounts (AMECO).



How did the system evolved after the Fall, 1973-1984

The negotiations to define a new monetary system in 1973 and 1974 proved unsuccessful due to the impossibility to achieve simultaneously monetary policy independence, fixed exchange rates and free capital flows. Therefore, each of the economic areas decided to cope with the fall of Bretton Woods in a different way.

- In the case of the U.S., policymakers decided to continue with the fiscal and monetary expansion in an attempt to achieve higher economic growth. At this time, Keynesianism (in the form of the Phillips Curve paradigm) reached its peak (Meltzer, 2005). The Federal Reserve continued to finance a large part of the fiscal deficit. This process brought the country to what is called "the Great Inflation", an inflationary spiral where wage increments reinforced the initial inflationary stimulus by the Fed. One of its consequences was to weaken even more the role of the dollar as a valid international currency.

- The countries of Western Europe, for whom intra-European trade was exceptionally important and whose Common Agricultural Policy could be seriously disrupted by exchange rate swings, wanted to peg their currencies to one another. Thus Europeans defined a new regional monetary agreement, which began with the "snake" from 1972 to 1978 and then to the European Monetary System (EMS) in 1979.

Economies of scale described in McKinnon (1993) determined that the EMS became a reduced form of the BW agreement with the deutsche mark at its centre [5]. The election of Germany as the central country was not political, but economical due to its very strong commitment against inflation. The rules of this new European system were the same mentioned above for BW, with Germany now providing a nominal anchor to the price level and running a balance of payment surplus. Its weaknesses were also the same. Periphery countries faced a trade off between domestic policies and exchange rate stability that was evident in the 1992 crisis (Eichengreen, 2007). At the same time, the central country (Germany) should avoid the temptation to free ride on its peers by loosening its monetary policy.

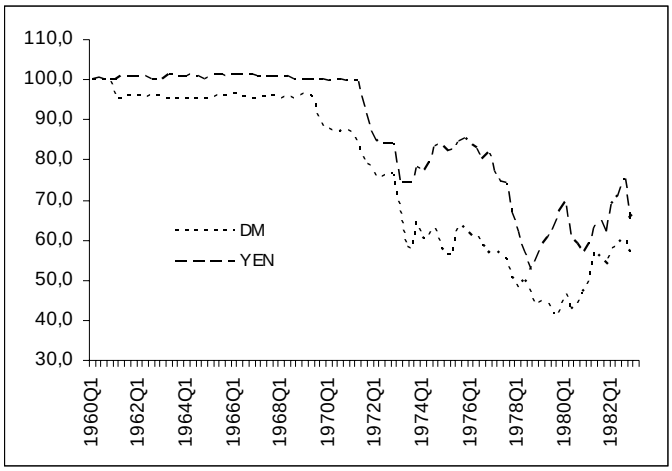
- In the case of Japan, not being able to find other monetary anchor, it had to allow its exchange rate to float, which meant an appreciation of the yen against the dollar from 360 YEN/USD in 1970 to less than 220 in 1979. This appreciation had two negative impacts on the Japanese economy, according to McKinnon (2006). The first one was to interrupt the process of wage adjustment prevalent since the end of the war. From 1950 to 1971 money wages grew at a 10 percent in Japan in comparison to a 4.5 percent in the U.S. This 5.5 percent difference was compensated by an increase in labor productivity (8.9 in Japan compared to 2.6 in U.S.) that allowed export firms to keep their competitiveness under fixed exchange rates. However, faced to an abrupt and uncertain appreciation trend, Japanese firms stopped the wage adjustment process to avoid losing competitiveness, creating a deflationary pressure.

The second one was due to what McKinnon calls "conflicted virtue" syndrome. As a considerable share of Japanese assets were in dollars, appreciation expectations led private agents to sell dollars for yens and forced the Bank of Japan to intervene to prevent the yen from appreciating too much, thus stepping into the exchange market buying dollars and selling yens, increasing its amount of official reserves in dollars. It generated a negative interest rates premium that reflects the potential depreciation of the dollar against the yen. This foreign exchange risk explains the Japan's zero-interest liquidity trap and the dire situation of the Japanese economy in the last 2 decades.

An important point, which partially supports McKinnon views, is that despite the constant appreciation of the yen (see Figure 4) the Japanese trade balance still reflects a surplus.

[5] In a system with N countries there are N (N-1)/2 exchange markets. However, if all trading takes place against a

Figure 4. Mark and Yen nominal exchange rates against the dollar (1960Q1 = 100). Source: IMF International Financial Statistics.



Lessons for 2008

The main factor behind the crisis of BW I was the loss of credibility in the commitment of US authorities to keep consistent macroeconomic policies, conducive to price stability. Even though a trade deficit in the US was an essential component of the system, in order to provide liquidity to satisfy a growing demand of dollar denominated assets when Europe and Japan were growing and catching up with the US, the US authorities failed to realize that excessive expansion of domestic demand was injecting more liquidity in the World Economy than what was consistent with price stability.

A second lesson to draw from the demise of BW is that it took a long time to happen. All the signs of a crisis were present, but at the end all the main players (the USA, Germany and even a not so important one, France) came to the conclusion that the sacrifices needed to keep it in place were worth the cost of plunging into the unknown, abandoning the system.

A third lesson to draw is that exchange rate instability and inflation ensued, especially in North America, it took almost a decade and severe policy adjustments in the US to bring inflation back under control, and restore confidence in the sustainability of the macroeconomic stance in the US.

Countries running big surpluses had to revalue their currencies (partially under the threat of trade sanctions), with significant wealth effects that finally caused a bubble in

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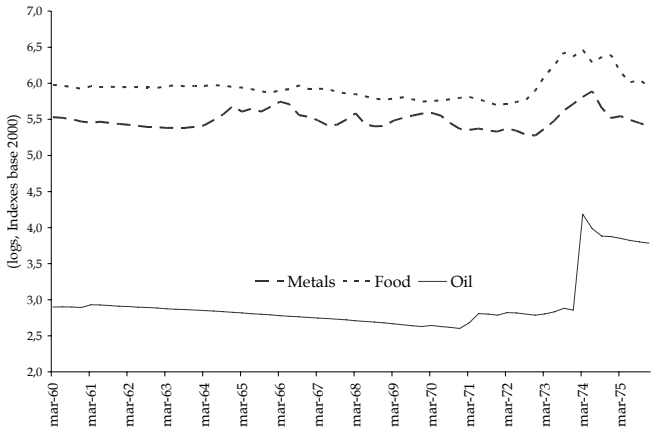
single reference or Nth currency, the number of such markets is reduced to (N-1).

asset prices that severely weakened their financial system, and then the economy as a whole, as authorities failed to act decisively enough to restore a solid banking system..

The role of the oil price shocks is still under debate. Many see them as exogenous shocks – at a most unfortunate moment. The fact that in the 80s oil prices came back to pre OPEC levels (in real terms) suggests otherwise: fast growth of the World Economy – and of oil as a consequence – created a shortage that allowed OPEC to seize the opportunity [6]. The second oil shock is even more obvious: uncertainty in the Persian Gulf and turmoil in a major ally of the US there at the time was bound to impact oil prices, especially in an inflationary context. Once price stability was reached and OECD countries reacted increasing efficiency in the use of energy, a long period ensued in which OPEC countries failed to impose discipline and oil prices fell down.

Figure 5. Relative prices of Selected Commodities
(prices indices deflated by industrial commodity prices).
Source: Datastream.



[6] Metals and grains enjoyed high prices in the late sixties and early seventies, well in advance of the rise of oil prices. (see Figure 5).

4. What do data tell?

4.1. Exchange rate volatility

To analyze exchange rates movement, we define $s(t)$ as the nominal exchange rate of a currency against the another. Our variable of analysis is the increment of its logarithm $x(t)=\log(s(t)/\ s(t\text{-}1))$. In Table 2 we present the mean value of $x(t)$ for the period 1998-2007. The table exhibits symmetry in absolute value (and opposed sign) as the $\log(1/s(t))=-\log(s(t))$. The results are compared with those of Table 3, with the same variables for the period 1960-1971.

It should be noticed that the Euro has experienced an appreciation against the USD, the same as the Chinese Renminbi. The biggest appreciation against the dollar has been the one of the Canadian dollar and the biggest depreciation the Brazilian Real. However, against the Euro almost all the currencies have depreciated, with the exception of the British pound and the Canadian dollar. Actually, the depreciation of the Renmimbi against the Euro (0.08) supports the idea that due to its peg the Dollar it cannot freely appreciate against the Euro (0.17-0.09 = 0.08).

Table2. Mean Value of the increment logarithm of the exchange rate (in %) 1998-2007. Source: IMF International Financial Statistics.

1998-2007	USA	China	Brazil	Canada	India	Japan	Mexico	UK	Russia	France	Germany
United States	0,00	-0,09	0,23	-0,38	-0,05	0,02	0,09	-0,19	0,12	-0,17	-0,17
China,P.R.: Mainland	0,09	0,00	0,32	-0,29	0,04	0,11	0,18	-0,10	0,22	-0,08	-0,08
Brazil	-0,23	-0,32	0,00	-0,61	-0,28	-0,21	-0,14	-0,42	-0,10	-0,40	-0,40
Canada	0,38	0,29	0,61	0,00	0,33	0,40	0,46	0,19	0,50	0,21	0,21
India	0,05	-0,04	0,28	-0,33	0,00	0,07	0,14	-0,14	0,17	-0,12	-0,12
Japan	-0,02	-0,11	0,21	-0,40	-0,07	0,00	0,07	-0,21	0,11	-0,19	-0,19
Mexico	-0,09	-0,18	0,14	-0,46	-0,14	-0,07	0,00	-0,28	0,04	-0,26	-0,26
United Kingdom	0,19	0,10	0,42	-0,19	0,14	0,21	0,28	0,00	0,32	0,02	0,02
Russia	-0,12	-0,22	0,10	-0,50	-0,17	-0,11	-0,04	-0,32	0,00	-0,30	-0,30
France	0,17	0,08	0,40	-0,21	0,12	0,19	0,26	-0,02	0,30	0,00	0,00
Germany	0,17	0,08	0,40	-0,21	0,12	0,19	0,26	-0,02	0,30	0,00	0,00

Table 3. Mean Value of the increment logarithm of the exchange rate (in %) 1960-1971. Source: IMF International Financial Statistics.

1960-1971	USA	China	Brazil	Canada	India	Japan	Mexico	UK	France	Germany
United States	0,00	0,00	2,48	0,05	0,35	0,00	0,00	0,12	0,09	-0,11
China,P.R.: Mainland	0,00	0,00	2,48	0,05	0,35	0,00	0,00	0,12	0,09	-0,11
Brazil	-2,48	-2,48	0,00	-2,43	-2,13	-2,48	-2,48	-2,36	-2,39	-2,58
Canada	-0,05	-0,05	2,43	0,00	0,30	-0,05	-0,05	0,07	0,04	-0,15
India	-0,35	-0,35	2,13	-0,30	0,00	-0,35	-0,35	-0,23	-0,26	-0,45
Japan	0,00	0,00	2,48	0,05	0,35	0,00	0,00	0,12	0,09	-0,11
Mexico	0,00	0,00	2,48	0,05	0,35	0,00	0,00	0,12	0,09	-0,11
United Kingdom	-0,12	-0,12	2,36	-0,07	0,23	-0,12	-0,12	0,00	-0,03	-0,22
France	-0,09	-0,09	2,39	-0,04	0,26	-0,09	-0,09	0,03	0,00	-0,19
Germany	0,11	0,11	2,58	0,15	0,45	0,11	0,11	0,22	0,19	0,00

Figure 7 Exchange Rate Depreciation (against the USD). Source: IMF International Financial Statistics.

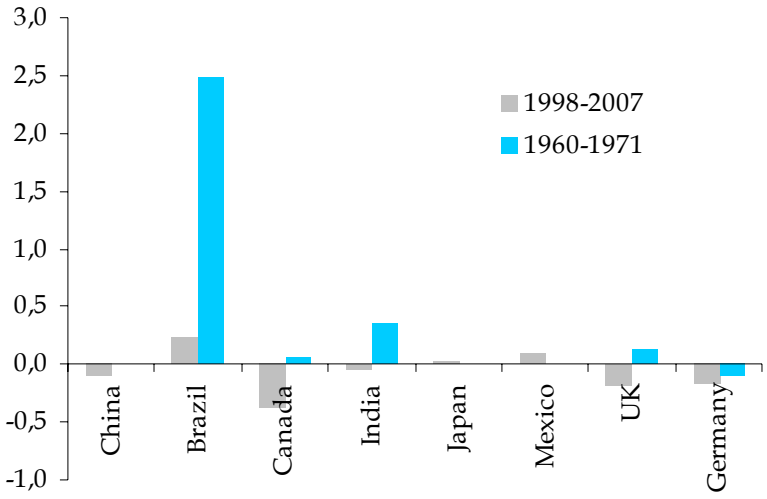
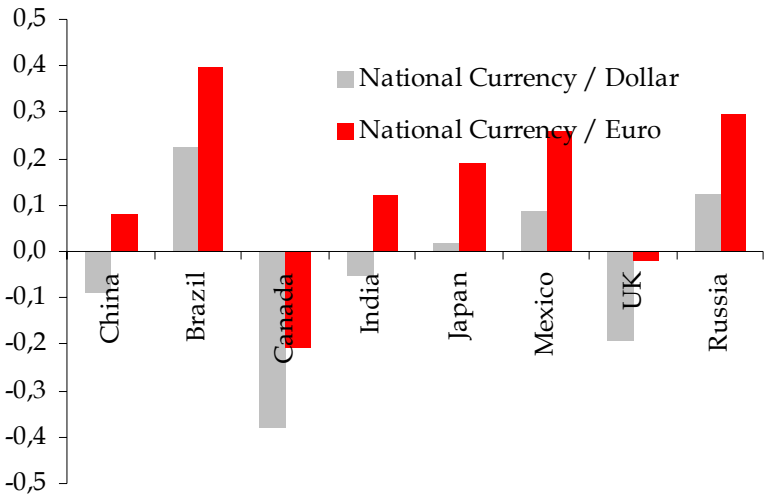


Figure 10 Exchange Rate Depreciation (against the USD and Euro) 1998-2007.
Source: IMF International Financial Statistics.



In Tables 4 and 5 we display the standard deviation of $x(t)$ for the periods 1998-2007 and 1960-1971. Despite the fact that the total volatility of the selected countries has not increased so much (the variance against the dollar has increased from 1.41 to 1.68) there has been a change in the role of the different countries. In the Bretton Woods Era, most European countries, Japan and some developing countries such as China and Mexico kept their dollar pegs, thus reducing the volatility of their exchange rates. Most of the exchange rate volatility came from countries outside the system, such as Brazil or India. In the current systems the roles are inverted and big developed countries float, thus increasing their variances. The only low dollar-volatility country nowadays in the selected group is China, due to its peg.

The picture against the Euro and the Yen is more interesting. The volatility of most countries against these currencies is higher than against the dollar, reinforcing the point made below that these currencies are absorbing the attempts to managed the floats (or directly the pegs) of many currencies against the dollar. Does this strategy of tracking the dollar make sense? To see this, there should be a rational to smooth exchange rates between countries with strong trade links, something we analyze in the next section.

Table 4. Standard Deviation of the increment logarithm of the exchange rate (in %) 1998-2007. Source: IMF International Financial Statistics.

1998-2007	USA	China	Brazil	Canada	India	Japan	Mexico	UK	Russia	France	Germany
United States	0,00	0,23	4,58	1,59	1,02	2,26	1,66	1,88	1,24	2,34	2,34
China,P.R.: Mainland	0,23	0,00	4,56	1,57	0,99	2,28	1,66	1,87	1,22	2,32	2,32
Brazil	4,58	4,56	0,00	4,48	4,52	5,11	4,40	4,94	4,68	5,01	5,01
Canada	1,59	1,57	4,48	0,00	1,69	2,42	2,24	2,03	1,93	2,21	2,21
India	1,02	0,99	4,52	1,69	0,00	2,34	1,84	1,93	1,40	2,34	2,34
Japan	2,26	2,28	5,11	2,42	2,34	0,00	3,01	2,20	2,33	2,45	2,45
Mexico	1,66	1,66	4,40	2,24	1,84	3,01	0,00	2,62	2,15	3,19	3,19
United Kingdom	1,88	1,87	4,94	2,03	1,93	2,20	2,62	0,00	1,91	1,42	1,42
Russia	1,24	1,22	4,68	1,93	1,40	2,33	2,15	1,91	0,00	2,20	2,20
France	2,34	2,32	5,01	2,21	2,34	2,45	3,19	1,42	2,20	0,00	0,00
Germany	2,34	2,32	5,01	2,21	2,34	2,45	3,19	1,42	2,20	0,00	0,00

Table 5. Standard Deviation of the increment logarithm of the exchange rate (in %) 1960-1971. Source: IMF International Financial Statistics.

1960-1971	USA	China	Brazil	Canada	India	Japan	Mexico	UK	France	Germany
United States	0,00	0,00	6,29	0,63	3,97	0,00	0,00	1,35	1,03	0,88
China,P.R.: Mainland	0,00	0,00	6,29	0,63	3,97	0,00	0,00	1,35	1,03	0,88
Brazil	6,29	6,29	0,00	6,31	7,55	6,29	6,29	6,47	6,40	6,40
Canada	0,63	0,63	6,31	0,00	4,02	0,63	0,63	1,45	1,23	1,06
India	3,97	3,97	7,55	4,02	0,00	3,97	3,97	4,20	4,11	4,06
Japan	0,00	0,00	6,29	0,63	3,97	0,00	0,00	1,35	1,03	0,88
Mexico	0,00	0,00	6,29	0,63	3,97	0,00	0,00	1,35	1,03	0,88
United Kingdom	1,35	1,35	6,47	1,45	4,20	1,35	1,35	0,00	1,70	1,60
France	1,03	1,03	6,40	1,23	4,11	1,03	1,03	1,70	0,00	1,35
Germany	0,88	0,88	6,40	1,06	4,06	0,88	0,88	1,60	1,35	0,00

Figure 9 Exchange Rate Volatility (against the USD).
Source: IMF International Financial Statistics

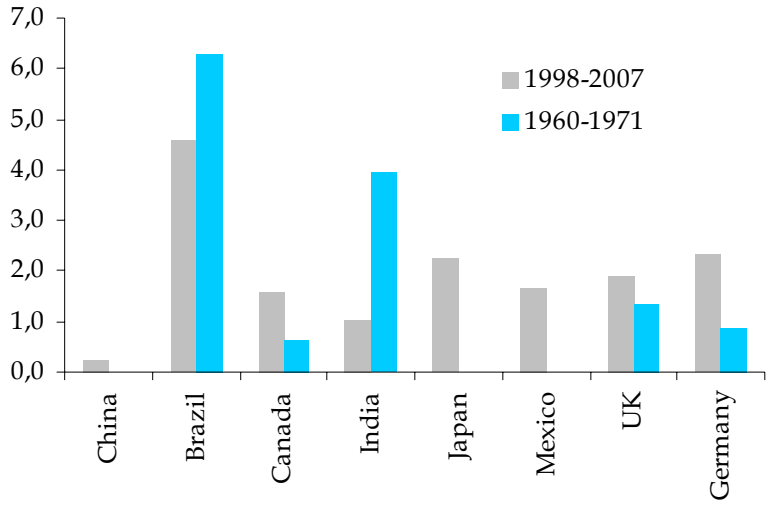
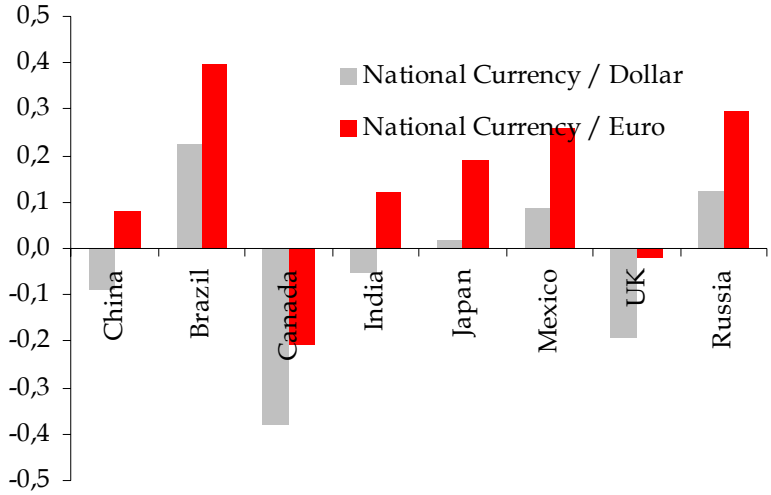


Figure 10 Exchange Rate Volatility (against the USD and Euro) 1998-2007.
Source: IMF International Financial Statistics.



4.2. Bilateral Trade Flows

In Table 6 it can be seen the structure of flows of bilateral exports in merchandise between countries, according to the World Trade Organization. In Tables 7 and 8 we

employ these data to decompose the flows as shares of exports or imports. Finally, in Table 9 we display the bilateral balances of payments in merchandises. The term "Four Asian Traders" refers to Mainland China, Hong Kong, South Korea and Singapur. We have not included oil-exporting countries in the analysis as they do not belong per se to the Bretton Woods II standard, as commented in Roubini (2007). From these analyses we extract three interesting conclusions.

The first is that, despite the hype, the trade balance between the U.S.A and the Asian Traders ($9b) is smaller than against Mexico ($78b), Japan ($87b) or the European Union ($118b), the three of them with floating currencies against the dollar. Soemthing similar could be said about imports (U.S. imports only 13%of the selected sample from the Four Asian Traders, in comparison to 25% from Mexico and 39% from Europe!). Therefore, the U.S. trade problem does not seem to be, as it is widely stated the U.S importing from China, which finances its deficit. If any, would be financing the U.S. deficit against Mexico or Europe.

The second is that Asian countries keep their pegs to the dollar as the U.S. is their best client , both in terms of imports and exports (in exports, it exports more to the UE25, but includes both Euro-zone countries and non-Euro ones, such as U.K.). However, the volume of its trade with Japan and Europe is huge, which makes a peg to the dollar inconsistent as a pure mercantilist measurement. In fact the Chinese Renminbi has experienced an appreciation against the Yen and the aggregate of the Four Asian Traders a current account deficit against Japan 6 times bigger than the one on the U.S. against the Traders. The picture against Europe is the opposite. Therefore the main reason to keep the peg should be a monetary one, oriented to have a nominal price anchor.

The third one is that the Japanese Yen has experienced a considerable depreciation against European countries (see Table 2), China and the U.S. and at the same time (and we do not imply causality) it runs a considerable trade surplus against this countries, making more reasonable that, were the U.S. Congress to choose a scapegoat in their "bashing" policies it would be Japan instead of China.

Table 6. Total flows of merchandise (exports/imports) in billions of U.S. Dollars, 2006. Source: World Trade Organization.

TOTAL USD		Importer							
	2006	Brazil	Four Asian Traders	Japan	Mexico	Rusia	USA	EU25	TOTAL Exports
Exporter	Brazil	0,0	4,7	3,9	4,5	3,4	24,8	30,5	**71,8**
	Four Asian Traders	5,6	0,0	58,4	8,5	6,2	107,6	109,7	**296,1**
	Japan	3,0	131,0	0,0	9,3	7,1	147,2	93,9	**391,6**
	Mexico	1,1	1,4	1,6	0,0	0,0	212,5	11,1	**227,8**
	Rusia	0,7	7,1	6,0	0,2	0,0	18,7	158,6	**191,4**
	USA	19,2	98,0	59,7	134,3	4,7	0,0	214,5	**530,4**
	EU25	21,8	95,5	55,1	23,5	89,3	332,8	0,0	**618,0**
	TOTAL Imports	**51,6**	**337,8**	**184,8**	**180,3**	**110,8**	**843,4**	**618,4**	**2327,1**

Table 7. Share of imports of merchandise by exporter country, 2006. Source: World Trade Organization.

Total % Imports		Importer						
	2006	Brazil	Four Asian Traders	Japan	Mexico	Rusia	USA	EU25
Exporter	Brazil	0%	1%	2%	2%	3%	3%	5%
	Four Asian Traders	11%	0%	32%	5%	6%	13%	18%
	Japan	6%	39%	0%	5%	6%	17%	15%
	Mexico	2%	0%	1%	0%	0%	25%	2%
	Rusia	1%	2%	3%	0%	0%	2%	26%
	USA	37%	29%	32%	74%	4%	0%	35%
	EU25	42%	28%	30%	13%	81%	39%	0%
		100%	100%	100%	100%	100%	100%	100%

Table 8. Share of exports of merchandise by importer country, 2006. Source: World Trade Organization.

Total % Exports		Importer							
	2006	Brazil	Four Asian Traders	Japan	Mexico	Rusia	USA	EU25	
Exporter	Brazil	0%	7%	5%	6%	5%	35%	43%	100%
	Four Asian Traders	2%	0%	20%	3%	2%	36%	37%	100%
	Japan	1%	33%	0%	2%	2%	38%	24%	100%
	Mexico	1%	1%	1%	0%	0%	93%	5%	100%
	Rusia	0%	4%	3%	0%	0%	10%	83%	100%
	USA	4%	18%	11%	25%	1%	0%	40%	100%
	EU25	4%	15%	9%	4%	14%	54%	0%	100%

Table 9. Bilateral Balances of Payments in billions of U.S. Dollars, 2006. Source: World Trade Organization.

Bilateral Balance of Payments		Importer							
	2006	Brazil	Four Asian Traders	Japan	Mexico	Rusia	USA	EU25	TOTAL Exports
Exporter	Brazil	0,0	-0,9	0,8	3,3	2,7	5,5	8,7	**20,2**
	Four Asian Traders	0,9	0,0	-72,6	7,1	-0,9	9,5	14,2	**-41,7**
	Japan	-0,8	72,6	0,0	7,7	1,1	87,5	38,8	**206,8**
	Mexico	-3,3	-7,1	-7,7	0,0	-0,2	78,2	-12,4	**47,5**
	Rusia	-2,7	0,9	-1,1	0,2	0,0	13,9	69,3	**80,6**
	USA	-5,5	-9,5	-87,5	-78,2	-13,9	0,0	-118,3	**-313,0**
	EU25	-8,7	-14,2	-38,8	12,4	-69,3	118,3	0,0	**-0,4**
	TOTAL Imports	**-20,2**	**41,7**	**-206,8**	**-47,5**	**-80,6**	**313,0**	**0,4**	0,0

Figure 11 Structure of imports of merchandise per country of origin for a selected group of countries (2006).
Source: WTO.

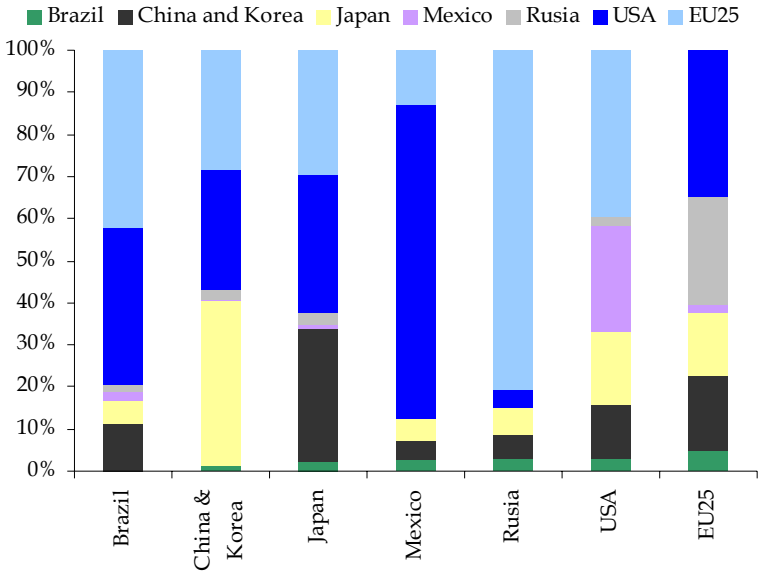
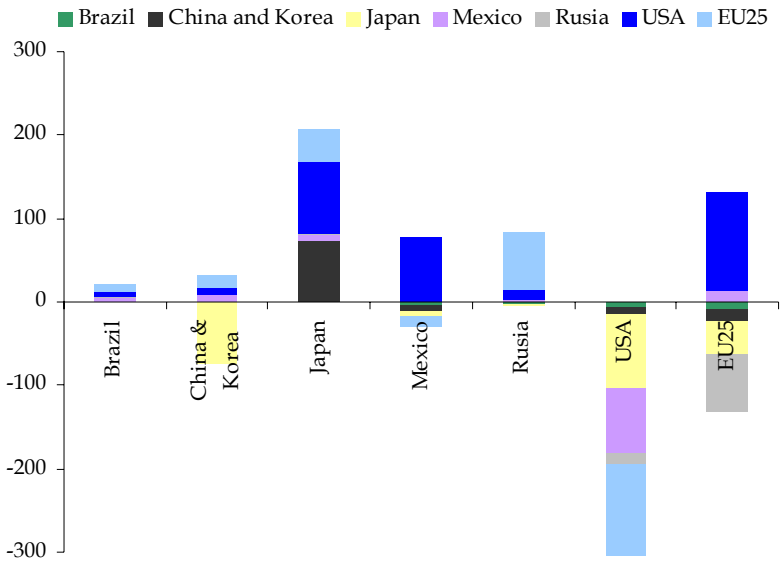


Figure 12 Bilateral balances of payments of merchandise per country of origin for a selected group of countries (2006). (Billions of USD at current prices).
Source: WTO.



5. Is Bretton Woods II Falling Apart?

As we discussed before, there are several voices claiming that we are close to the end of BW II, for reasons similar to those that brought down BW I: economic policies that have been too expansionary in the US and a lack of credibility of the anti-inflationary commitment of political authorities in the US. The most common symptoms mentioned are the rising burden of the public debt, major public liabilities in the medium and long term (Public Health Programs, War expenses and the rising burden of Veteran Benefits, and the fact that after being a creditor country for most of the 20th Century, the US has turned into a debtor country with a high Current Account Deficit. The statement that the deficit is sustainable in the long term as Asian governments will not diversify their reserves to prevent the dollar from sharply depreciating and harming their export-led models is polemic at least. Eichengreen (2005) affirms that this argument misses the distinction between collective interest (avoiding a run on the dollar) and individual interest (to get out before the bottom falls out of the U.S. currency). According to him, the experience of the Gold Pool in the 60s shows how a Nash equilibrium could be possible where agents run out of the dollar for fear of their peers doing it before them even if it generates a collective harm.

An additional problem is that BWII is an informal agreement, without an explicit institutional backing that might help to negotiate and find acceptable compromises among all major players. Even more, the IMF does not formally support the system of pegged exchange rates and has called for its end and the transition to floating exchange rates (Mishkin, 2006). In the post war years, Western Europe, Japan and the U.S. were allies in the Cold War. Nowadays we have more player and bilateral negotiations between U.S. and Europe,. China, Russia or India will not suffice. Coordination now is far more complex than before.

An additional factor, not present at the end of BWI is the existence of a second candidate for international money, besides gold: the Euro. In the 70s there was no currency that could take the baton of the dollar. However, nowadays the Euro is supported by an economic area equivalent to the United States, with a solid anti-inflationary central bank, a more balanced current account and high income levels. So the evolution towards a multi-currency system with floating rates is a real possibility worth considering. Even Asia could conceivable built a common currency area lending more weight to such a scenario.

In our view it is still too early to proclaim the demise of BW II. The new U.S. administration, backed by a powerful Federal Reserve, could correct fiscal imbalances, present and future (taxation in the US is way lower than in the OECD) and as domestic demand is reigned in and the rest of the world keeps growing at a reasonable pace (faster in Developing Countries than Europe and Japan) the US trade deficit might fall so to start bringing down the Debt to GDP ratio to more comfortable levels. However, if political statements by candidates are any guide to actual policies, this seems rather unlikely. Our two major concerns are inflation and protectionism.

If the Federal Reserve looses its grip on inflation, due to political pressures to expand the economy, the necessity to bail out a considerable share of the financial sector after a severe financial crisis, or just old fashioned budget deficit financing, countries pegged to the dollar would face a "trilemma": i) to import U.S. inflation, ii) to impose capital controls and try to sterilize the "hot money" inflows or iii) to allow their currencies to appreciate against the dollar, either by free floating or by pegging to another currency such as the Euro. So far this scenario is not imminent, as there is no evidence of a deviation of the Fed from its anti-inflationary mandate, as shown in Figure 13.

The second threat comes from a protectionist backlash consequence of the deterioration of the U.S. external position. A bill introduced into the U.S. Congress in March 2005 to impose a 27.5% tariff on all Chinese imports unless the renminbi was appreciated led to the end of the Chinese peg, which has steadily appreciated since them. Further pressure on the renminbi, similar to the Nixon shock of 1971, could force the Chinese to leave the system, allowing the dollar to depreciate. In Figure 14 it can be seen a comparison between the nominal and real RMB/USD exchange rates, where the CPI has been employed to construct the real rates. It is important to notice how the real exchange rate was only lightly depreciated at the end of 2007 with respect to its 1990 (12%) or to its 1998 (8%) values and that it had actually appreciated a 7% since it began the nominal appreciation process.

Figure 13. Chinese and American changes in CPI. Source: IMF International Financial Statistics

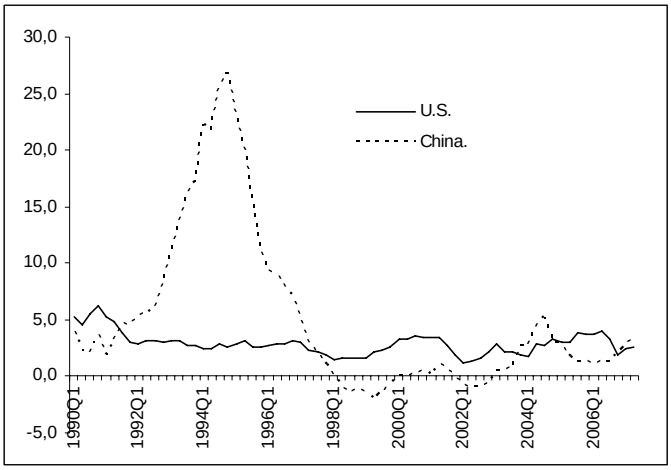
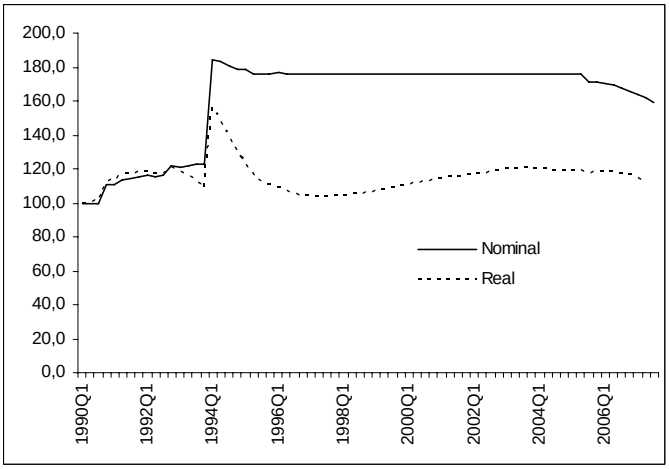


Figure 14. Renminbi/USD nominal and real exchange rates (1990Q1 = 100)[7]. Source: IMF International Financial Statistics.



[7] Real Exchange rates are constructed by including the U.S. and Chinese CPI.

6. After Bretton Woods II

Which would be the consequences of an abrupt end of the system? The traditional economic view, fostered for example by the IMF, would be that the depreciation of the dollar would help to correct the global imbalances by increasing U.S. competitiveness and forcing the Chinese to increase absorption by relying more on private consumption. Another, more dramatic view, is the one held by McKinnon 2006, 2007). According to his view, were China to sharply appreciate, it would follow the path of Japan in the 80s and 90s, disrupting the wage adjustment and monetary policy mechanisms. The consequence would be an appreciation-deflation spiral that would produce a severe recession in China but that would not correct the U.S. current account imbalance as it is consequence of its structural low level of savings. Notwithstanding, a big difference between China now and Japan in the early 90s, is that the former still has a very large pool of cheap labour that could produce large gains in productivity, just by re-allocating it from farming to manufacturing or the services sector.

From what we have seen in previous episodes of international monetary system breakdowns, we can expect at least some of the following consequences:

-A prolonged period of instability, while countries or groups of them search for new arrangements. This has been usually accompanied by exchange rate volatility and higher financial risks.

-Financial globalization will suffer as rising risk premium make international capital flows costlier.

-Worldwide resurgence of inflation is a distinct possibility, especially if large players like the US engage in competitive devaluations in a multi-block world. This will further harm financial globalization, as sooner or later real interest rates are bound to go up.

-Indexation of financial instruments might become more popular, as a way to gain protection against some forms of instability and risk.

-The worst scenario would be one of trade wars and financial retaliation. This will disrupt international trade and financial flows, with a generalized loss of efficiency and productivity. Under such a complex scenario and with so many players in place, geopolitical risks might rise dramatically, with countries trying to out- manoeuvre each other in pursuit of basic resources such as energy or food, or to gain access to important markets. This scenario brings too many reminiscences of the beginning of the 20th to feel comfortable about it. On the other hand, this could be a textbook example of what tends to happen when major empires decline and become challenged (Ferguson, 2006).

No matter how negative these scenarios might look, it might be worth considering some medium – to – long –term options, or at least, components of what might be a new World Financial Architecture. We explore first the viability of a new international anchor around the Euro, and then explore the possibility of an Asian Currency Union.

6. 1. Can the Euro come to the rescue?

The Euro is a candidate with at least some appeal. Even though is a rather young currency, its direct area of influence has gained significant weight, not only by the enlargement of the EMU, but also because of the gains in value vis a vis the dollar. If other countries decide to join – a likely event if BWII falls apart – this will also help.

One big disadvantage of the Euro, though, is that the Eurozone lacks of a true global financial Centre, such as London of New York. In the - still unlikely - event that the UK joins the Euro, that could change, giving a significant boost to the Euro as a credible option to the dollar.

However the Eurozone has some drawbacks that might hurt the Euro options. First of all, Public Debt in the main countries of the region is way high, even though it remains mostly in domestic hands, thanks to high savings ratios in the private sector. Long-term public liabilities linked to pensions and health care, in a region with and ageing population also conspire against long-term sustainability. On the positive side, making the Euro the anchor of the system would allow to reduce public debt by taking advantage of segniorage. Besides, European countries have shown far less reluctance than the US to address fiscal issues, and they have already started a process to reduce pension liabilities.

Perhaps the biggest problem for the Euro to become a true anchor lies in the fact that the Eurozone is very dependent on its exports to growth, given the high savings ratio of the region. As gains in the value of the Euro are seen as permanent, then significant wealth effects will take place and consumption might rise, setting up the basis for a sustained trade deficit that will provide international liquidity, but that might entail a painful economic restructuring, with a loss of manufacturing capacity, in favour of services. This has been a painful process in the US, arising strong protectionist pressures.. Unfortunately the free-trade credentials of the EU are far worse than the US and the spectre of protectionism is always waiting behind the EU Commission doors, as the CAP has shown time and again.

The prospect of the Euro replacing the US dollar as the anchor of the International Monetary System seems unlikely in the short term, but in a more flexible system, with

many countries pegging to baskets of currencies, there is little doubt that Euro will gain international weight. If new countries join the EMU, especially if the UK is among them, then the likelihood that the Euro might become at least as important as the dollar would be high.

6.2. A nominal anchor for Asia: a monetary union?

One of the main consequences of the collapse of Bretton Woods II would be that emerging Asia will be left without a nominal anchor. Although Asian exchange rates have become more flexible in the last few years, fear of floating is still pervasive and a few countries still maintain a peg with the dollar.

The strong dollar of the past decades and low and stable inflation probably explains why emerging Asia has maintained the dollar as an anchor, to a larger or lesser degree, despite growing economic integration. In fact, growing regional trade, FDI, and production networks have increased interest in monetary and financial integration but the process is still at its infancy. It is estimated that more than half of the total trade in the region is intra-regional trade (Garcia-Herrero, 2006 and Kawai, 2005) but regional financial flows are still very limited even if the region has the largest holdings of foreign exchange reserves in the world.

There are a number of reasons why the Asian region has not advanced much in terms of monetary and financial integration and why it is also unlikely that they will in the near future, even if Bretton Woods II collapses.

The first and most basic is that countries within the region are in very different stages of social, political, and economic development, with Japan and newly industrialized economies (NIEs) such as Korea, Hong Kong, Singapore and Taiwan in one group and low-income countries in transition on the other, such as Burma, Cambodia, Lao and Vietnam.

More specifically, the economic feasibility of a monetary union is generally assessed by the closeness of countries to an optimal currency area (OCA) as proposed by Mundell (1961) and McKinnon (1963). The criteria to set up an OCA depend on symmetry of economic shocks, especially that of supply shocks, factor mobility in labor and capital, and wage and fiscal flexibility. The first criterion is particularly important as it is considered as a sufficient condition to form an OCA. Recent empirical studies on Asia have shown that there is increased business cycle synchronization, as commented in Kawai and Motonish (2005) and Garcia-Herrero (2006) . The latter compares the degree of business cycle synchronization taking Japan or China as an anchor and find different clusters of countries

for the two cases. In addition, the author finds no evidence that the two largest economies, Japan and China, have been driving economic integration in the region, as was the case in Europe. This is particularly important when pondering which Asian currency could be used as an anchor for monetary cooperation.

All in all, the empirical evidence surveyed so far suggests that the current level of economic integration in Asia still falls far short from an Asian monetary union, in spite of great progress made over the last twenty years. So what will be the implications for Asian currencies should Bretton Woods II fail in terms of further depreciation of the US dollar and de-pegging of Asian currencies?.

A first scenario, given the above, is that currencies in the region may experience a period of high volatility, akin to what happened after the collapse of Bretton Woods I. At this juncture, two important currencies, the yen and the yuan, are not suitable to become nominal anchors for other economies in region. The Japanese yen appears to have a path of its own, which reflects Japan's unique economic conditions, economic stagnation and deflation. The rest of the region, in turn, is growing at a fast pace and experiencing relatively high inflation. Although the yen is international reserve currency in some of the East Asian economies, it is not used as an invoice currency even for intra regional trade purposes, largely owing to the limited influence of the Japanese financial sector in the region. Furthermore, the yen has been extremely volatile even more so in the last few years as it has been heavily used for speculative (mainly carry-trade) positions. All these reasons make it highly unlikely for Asian economies, other than for Korea perhaps, to use the yen as a nominal anchor.

As for the yuan, it has gained status in recent years because of China's growing importance in international trade and finance but it lacks a basic necessary condition for a currency to be used internationally, namely convertibility. Furthermore, Chinese economic authorities do not seem keen to lift capital controls in the near future. The People's Bank of China has not yet enough credibility for sound monetary policy and its reputation will take time to build. Therefore, it is also very unlike for the yuan to be used as a nominal anchor for other emerging market economies.

This then leaves the euro as an alternative choice for the region to use as a nominal anchor but even this is not so clear. In fact, the euro is still a relatively new currency and the euro area's business cycle is hardly synchronized with that of Asia.

In sum, should the Asian region move away from the dollar, its domestic currencies would likely be quite volatile in the search of an anchor. This is all the more true as its capital and financial markets –albeit large - are still rather illiquid.

A second scenario would be for Asian countries to move to a common basket comprised of local currencies. This makes all the more sense insofar regional economic integration has grown fast. But it is clearly difficult to implement and also might not be perceived as a transparent anchor. Some steps have been taken in this direction with the creation of an Asian Currency Unit (ACU) weighted by either GDP size or trade volume of each economy in East Asia. The ACU, however, is still an accounting creation of the Asian Development Bank since it does not really exist. In fact, most countries are dissatisfied with the weighting scheme among other issues. From a practical point of view, given the lack of a surveillance mechanism and the huge diversity in financial and foreign exchange market developments, it would also be very difficult for the regional economies to monitor whether a country is deviating from the ACU. The upside of adopting this approach is that it would clearly foster monetary coordination and could perhaps be the first step towards a monetary union. On the other hand, institutions take time to build and their imperfection or inadequacy in the interim may also bring about volatility to the ACU arrangement. Nevertheless, the recent efforts to set up a USD80 billion fund that multilateralizes the existing lending and borrowing agreements under the Chiang Mai Initiative would be a positive step in the right direction if the proposed institutional framework is to be established soon.

In any event, the experience from Europe suggests that the formation of a monetary union in Asia requires further monetary and exchange rate policy coordination in various steps at different stage of economic integration, as the long experiment with the EMS before the formal launch of the Euro shows. Given the current stage of economic development in Asia, the process probably will also take very long. Therefore, the Asian Monetary Union is not a short or even medium term alternative to replace Bretton Woods II

A third scenario –clearly more likely than the second - would be for emerging Asia to continue its current intermediate exchange rate regime but with local currencies truly referenced to a basket of currencies. In particular, given the reduction in trade with the US and also the sliding US dollar, this could have a smaller weight in the basket. Obviously, as opposed to the previous scenario of a common currency unit, currency weights would be allowed to differ from country to country, adding flexibility to the system. This is indeed a muddling through strategy with a hope that the dollar will return to its dominance and US monetary policy will regain credibility. However, such arrangement would be less conducive to further regional economic integration and it also does not exclude large currency volatility.

In sum, notwithstanding growing economic integration in the Asia, there is not enough economic leadership within the region to think of an internal nominal anchor (either the yen, the yuan or even a basket of Asian currencies) which can substitute the sliding dollar. This points to potentially large volatility of Asian exchange rates in the event of a collapse of Bretton Woods II.

7. Conclusions

The Bretton Woods II thesis by DFG (2005, 2007) has been under severe scrutiny in the last years. It succeeds to explain why the U.S. current account has been sustained by Asian countries with dollar pegs in an analogy to the "exorbitant privilege" of being the central currency in a fixed exchange rate system similar to the post war arrangement. Less justified is the point is the build-up of reserves as an international collateral, and not a mere by-product of the difference between aggregate savings and investments, which initially were quite desirable to avoid speculative attacks like the ones in the 90s and 80s. Furthermore, giving credit to the author's analysis of the *current* situation does not mean agreeing with their conclusions about the sustainability of the system, as commented in Eichengreen (2005). The original Bretton Woods agreement collapsed in the end, so its offspring is not invulnerable to a premature (and violent) death.

Why did the original agreement ended? In the end it was due to a combination of two motives. On one hand, the central country relinquished its commitment to price stability, free-riding on followers by 'living beyond its means', i.e. conducting expansionary fiscal and monetary policies that forced periphery countries to import inflation as long as they wished to avoid their currencies from appreciating. On the other hand, periphery countries had learned the lessons from the Great Depression, where the desire of some of them (ex. the Gold Block) to maintain their commitments to the international system severely damaged their domestic performances. Therefore, in the 70s they'd rather put an end to international coordination than to make their people suffer for foreigners' sins. The outcome was a Nash equilibrium where domestic goals were given priority over international ones. Europeans tried to rebuild a smaller version of the system around the mark, as the political and trade ties were higher, whereas Japan began an appreciation trend that may have been at the basis of its economic collapse in the early 90s.

The situation today has some similarities with the one in the 70s. The U.S. is apparently living again beyond its means, with an enormous trade deficit and an expansionary monetary policy to support its financial system. The funding to do it has come from Asia, which maintains a peg to the USD not as a mercantilist tool, as some authors affirm, but as a monetary anchor due to their underdeveloped financial system. A proof of this (possibly polemic) statement is the fact that the trade deficit between the U.S. and, for example, China and Korea is nothing compare with the deficit with Mexico, Japan or Europe (not even considering the oil-exporting countries) or that the real exchange rate between the U.S. and China has been roughly constant for the last 2 decades. The working

of the system seems to be more related with a desire for price stability than with mercantilist attempts to free-ride by currency manipulator (a concept that it is even opposed by some authors like McKinnon).

Therefore, the system may be sustained as long as the players keep on playing by its rules. Its rules refer to price stability in the U.S., a reduction in absorption in this country and an increment in consumption in Asia that helps to reduce the account imbalances, in a similar way as European countries did with their fiscal policy in the 60s. If any of the players deviate for too long on one of the rules, the other may decide to leave the system. In the current situation it could come from two scenarios. In one of them, the U.S. loosens its monetary policy due for example to financial distress in its financial system, increasing inflation. In this situation it will be plausible a run on the dollar by fear of depreciation. In contrast to the 70s, where no alternative currency could compete with the dollar, the Euro now can become a serious contender. In the second scenario, the U.S. forces Asian countries to appreciate, beginning an appreciation-deflation spiral in Asia with unknown end.

Both scenarios would have a similar outlook. An increase in exchange rate volatility (especially of Asian countries, though the Euro would become probably less volatile), a dollar depreciation (and probably inflation) and, eventually calls for protectionism which could harm the globalization process. Under these scenarios the Euro could replace the dollar as central currency, something quite improbable in the medium term in the absence of these shocks.

What about Asia? The prospects there are not too optimistic if an abrupt end to the system happens. Unable to find an Asian monetary anchor (with almost deflation in Japan and capital controls in China) and with underdeveloped financial systems and immature central banks, Asian countries would have to look to Europe for a new anchor or begin experimenting with floating. Although the far future could witness different monetary unions (Europe, Asia, LatAm?) with their respective currencies floating against one another, lack of political coordination today makes it almost sci-fi.

So, in the end, the near future will be shaped by the working of current institutions (which have repeatedly showed their serious flaws). Lack of political leadership towards a coordinated outcome could head the world to a collapse similar to the one of the 70s. It remains to be seen…

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