

Post-Keynesian Theory and a Policy for Managing Financial Market Instability and its Relevance to the Great Recession*

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Abstract

For more than three decades, orthodox economists and policymakers, motivated by some variant of classical economic theory, have insisted that (1) government regulation of markets and large government spending policies are the cause of all our economic problems and (2) ending big government and freeing especially financial markets from government regulatory controls is the solution to those problems. In response, governments around the world have been freeing up financial markets and trying to reduce their involvement in economic matters. Yet, in 2007-8, the global economy experienced an alarming financial market meltdown that led to the Great Recession in which we are still enmeshed.

To those who profess the belief that free markets produce socially optimum solutions, this paper explains why the facts do not support this conclusion. Keynes's liquidity theory and the Post-Keynesian theory that developed from Keynes's analysis can explain (a) why free financial markets cannot be efficient and (b) how to develop policies and institutions to reduce the possibility of financial market instability.

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1. Introduction

For more than three decades, orthodox economists, policymakers in government, and central bankers and their economic advisors, motivated by some variant of classical economic theory, have insisted that (1) government regulation of markets and large government spending policies are the cause of all our economic problems and (2) ending big government and freeing markets, especially financial markets, from government regulatory controls is the solution to those problems, both domestically and internationally. In response, governments around the world have been freeing up financial markets and trying to reduce their involvement in economic matters. Yet, in 2007-8, the global economy experienced an alarming financial market meltdown that led to the Great Recession in which we are still enmeshed.

In testimony before Congress, Alan Greenspan once stated that he had overestimated the ability of free financial markets to self-correct and likewise missed the possibility that deregulation could unleash such a destructive force on the economy.¹ Greenspan admitted, “I still do not fully understand why it happened, and, obviously, to the extent that I figure it happened and why, I shall change my views.”²

To Greenspan and others who profess the belief that free markets produce socially optimum solutions, this paper explains why the facts do not support this conclusion. Keynes’s liquidity theory and the Post-Keynesian theory that developed from Keynes’s analysis can explain (1) why free financial markets cannot be efficient and (2) how to develop policies and institutions to reduce the possibility of financial market instability.

As nations deregulated domestic and international markets, events occurred that were just not supposed to happen in a world of efficient markets. For example, (1) starting in the 1970s, the United States continued to run deficits in its trade balance; (2) countries that pursued export-led growth policies to obtain persistent (Mercantilist) favorable trade balances and accumulate huge foreign reserves in the process were considered economic miracles (e.g., Japan in the 1980s, China in the 1990s and 2000s, etc.); (3) financial markets continually suffered from “bubbles,” e.g., in the United States, the

¹ Greenspan stated: “This crisis, however, has turned out to be much broader than anything I could have imagined.... In recent decades, a vast risk-management and pricing system has evolved, combining the best insights of mathematicians and finance experts supported by major advances in computer and communications technology.

² A Nobel Prize was awarded for the discovery of the [free market] pricing model that underpins much of the advance in [financial] derivatives markets. This modern risk-management paradigm held sway for decades. The whole intellectual edifice, however, collapsed.

dot.com bubble of the 1990s and the real-estate bubble in the 2000s, where a small number of subprime mortgage defaults in the US spread to create a global banking and economic crisis; and (4) outsourcing and off-shoring created unemployment in the US, thereby limiting (if not actually lowering) real income for domestic workers—in contrast to the gains that should have accrued to labor according to the conventional wisdom of the law of comparative advantage.

At best, mainstream economists would claim these events are merely short-run exogenous disturbances, and, in the long run, if we maintain our *laissez-faire* faith in free markets, then the economies of all nations will experience global full-employment prosperity. Keynes [1936, p. 192] noted that such theorists “offer us the supreme intellectual achievement ... of adopting a hypothetical world remote from experience as though it were the world of experience and then living in it consistently.”

The fundamental principles underlying Keynes’s liquidity theory, and in his “Keynes Plan” proposal presented at the 1944 Bretton Woods meeting, explain why free trade, freely flexible exchange rates, and free international capital-funds mobility are ultimately incompatible with global full employment and rapid economic growth. Keynes’s liquidity theory suggests policies that will prevent or at least alleviate the distress caused by financial market instabilities and bubbles. It also can explain why devaluing a nation’s currency to make its industries “more competitive” is a self-defeating tactic.

Classical economic theory on the one hand and Keynes’s serious monetary theory of an entrepreneurial economy on the other provide differing explanations of debt dynamics and financial instability. The audience for this paper will have to decide whether the classical theory that most economists subscribe to is, as Keynes claimed, “a theoretical world remote from the real world in which we live” and whether Keynes’s theory is more descriptive of the world of experience.

2. Time and The Future

Time is a device that prevents everything from happening at once. All decisions that are made today will have their results or payoff at some time in the future. This is most obvious in investment decisions in plant and equipment, where the realized rate of return will be achieved only years after the decision to invest is made. But once the decision is made, the decision maker is stuck with the investment over its useful life. Investment in plant and equipment is like most marriages—till death do us part. Will the rate of return actually received over the life of the investment be the same as that the entre-

preneur expected at the moment the investment decision was made? And how was the entrepreneur's expected rate of return obtained?

For the purchase of financial assets, the realized rate of return of the asset will only be known at the end of that asset's life. If, however, the financial asset is liquid, i.e., traded in a liquid market (characteristics to be defined below), then the moment the holder decides something is going wrong and his/her expected return is unlikely to be achieved, the holder can make a fast exit by selling the asset for money at a price close to the last transaction price and thereby limit the potential anticipated loss. Divorce is not only possible before death, but it occurs often in the world of liquid assets. If a financial asset is illiquid, however, then the holder is stuck with the asset until death does them part.

In our world, little is known with certainty about future payoffs of investment decisions made today. How, then, can managers make optimal decisions on where to put their firm's money and householders where to put their savings?

3. Knowing The Future

For most of the history of mankind, it was believed that the design of God or the gods was the cause of anything that happened in the world of experience. In the 17th century, philosophers began arguing that events could be explained on the basis of reasoning of the mind rather than religious belief. This was the beginning of the intellectual movement historians call The Age of Reason. The power of reason was not in the possession, but in the acquisition, of truth.

Reasoning involves the human mind creating a theory to explain events we observe. For example, Newton saw an apple fall from the bough of a tree to the ground and developed the scientific theory of gravity. Darwin created the scientific theory of evolution to explain the different species that he observed inhabiting the earth. Today, most civilized societies believe that understanding of real-world phenomena comes in the wake of scientific theories. Do we have a scientific theory, or is it the will of God, that explains the change in financial prices and the possibility of instability in financial markets?

What is a scientific theory? A theory attempts to explain events on the basis of a logical model that starts with a few axioms. An axiom is an assumption accepted as a universal truth that does not need to be proved. From this axiomatic foundation, the laws of logic are used to reach conclusions to explain the events we observe. All theories are generally accepted in some ten-

tative fashion; theories are never conclusively established. Furthermore, we must recognize that the aim of scientific theories is to explain processes that are occurring in the external world. Prediction of future events may be a tool of certain scientific methodologies, but it is not the goal of science itself. Nor can all scientific theories provide the basis for making accurate predictions. At best, prediction may be regarded as a useful byproduct if it can be attained under the theory being developed.

Economic theorists build a theory or model based on some fundamental axioms. The logical conclusions are then presented to the public as the explanation of economic events. If the facts of experience conflict with the economic theory, then one or more of the theory's fundamental axioms are flawed and should be discarded so a different theory can be built. [The alternative would be to change the facts to fit the unrealistic theory, as, I must admit, sometimes happens in academia and in Washington.]

Keynes [1936, p. 3] stated that the fundamental axioms of classical theory were applicable to a "special case....[that] happen[s] not to be those of the economic society in which we live, with the result that its teaching is misleading and disastrous if we attempt to apply it to facts of experience." This statement is especially applicable today, given the ongoing economic austerity discussions in Washington, the UK, Euroland, and, perhaps, even in Turkey.

For Keynes [1936, p. 16, emphasis added], classical economic theorists are "like Euclidean geometers in a non-Euclidean world who discover that apparent parallel lines collide, then rebuke these lines for not keeping straight. Yet, in truth, there is no remedy except to throw over the axiom of parallels and to work out a non-Euclidean geometry. Something similar is required today in economics."

A theory is more "general" if it has fewer restrictive axioms than any alternative theory. To create his general theory (of non-Euclidean economics) to explain why recessionary "collisions" occur, Keynes rejected three restrictive classical axioms. Nevertheless, these axioms still underlie the textbook treatment of conventional economic theory, whether it is called New Classical economics or New Keynesian economics. These axioms are (1) the ergodic axiom, (2) the neutrality of money axiom, and (3) the gross substitution axiom.

The Ergodic Axiom. Any statistician will tell you that to draw any statistical inferences regarding the properties of a population universe, one should draw a sample from that universe. Since drawing a sample from the financial markets that will exist in the future is impossible, the ergodic axiom presumes that the future is already predetermined by an unchanging probability distri-

bution. [Stationarity is a necessary condition for ergodicity.] Simply stated, a sample from the past is considered equivalent to drawing a sample from the future. This ergodic axiom is an essential foundation for all the risk-management models developed by the “quants” on Wall Street as well as the rational-expectations assumption most economists profess. How do decision makers obtain rational expectations except by analyzing past and current samples of market-data fundamentals?

Acceptance of the ergodic axiom by today’s economists makes a difference in determining the proper role of government in the economy. Samuelson (1969), Lucas (1981) and others have adopted, either explicitly or implicitly, the ergodic axiom because they want economics to be in the same class as the “hard sciences,” such as astronomy. The science of astronomy is based on the presumption of an ergodic stochastic process that governs the movement of all the heavenly bodies from the moment of the “Big Bang” to the day the universe ends. Accordingly, statistical analysis using past measurements of the movements of heavenly bodies permits astronomers to predict future solar eclipses within a few seconds of when they actually occur.

However, nothing Congress, the President of the United States, the United Nations, or environmentalists can do will alter the predetermined dates and times for future solar eclipses. For example, Congress cannot pass an enforceable law outlawing solar eclipses in order to provide more sunshine and thereby enhance crop production. In an ergodic world, all future events are already predetermined and beyond change by human action today. Consequently, if one asserts economics is an ergodic process, then there is no role for government to alter the already predetermined future path of the economy. Government must adopt a *laissez-faire* philosophy towards economic outcomes if economics, like astronomy, is an ergodic science. If, however, economics is a nonergodic science, then proper government policies can create—and thereby alter—the economic future to improve the human standard of living relative to what would occur under a *laissez-faire* system of government.

Textbook economic models implicitly assume people know the future, or at least have rational expectations that provide actuarial certain knowledge of the future. Consequently, people make “real” decisions and are not “fooled” by nominal values in their business and consumption decisions, i.e., a fundamental classical axiom is that money is neutral. But if money is neutral, financial-market crashes in nominal terms (as the global economy experienced in 2007-8) should have no effect on the real economy, since the marginal physical productivity of the underlying real capital assets are unchanged, and,

therefore, their real productivity value should be unchanged.³ So these facts seem to be incompatible with the neutral money axiom!

4. Money Contracts and Uncertainty

In their book, Arrow and Hahn [1971, pp. 256-7, emphasis added] wrote "The terms in which contracts are made, matter. In particular, if money is the goods in terms of which contracts are made, then the prices of goods in terms of money are of special significance. This is not the case if we consider an economy without a past or future. . . . if a serious monetary theory comes to be written, the fact that contracts are made in terms of money will be of considerable importance."

Keynes provided a new way of economic thinking to explain the operations of a monetary economy where entrepreneurs and households enter into money-denominated contracts in order to organize all market production and exchange activities.⁴ Keynes's general theory provides, in Arrow and Hahn's words, a "serious monetary theory."

In our world, decision makers know that they do not, and cannot, know the future. Yet they wish and strive for some way to have control of their economic future so as to protect themselves from possible adverse outcomes. Accordingly, the capitalist system has developed (1) the institution of money contracts to provide decision makers, operating in an uncertain world, with some legal certainty about future cash inflows and outflows arising from today's decisions and (2) the liquidity concept, which is the ability to meet one's money contractual obligations as they come due. This liquidity concept is an essential aspect of individual decision-making in a capitalist economy and a financial-market system—exemplified by the fact that everyone in this room examines his or her liquidity position almost every day of their lives. The sanctity of money contracts is the essence of the capitalist system and Keynes's analysis. In the Keynes–Post-Keynesian analysis, liquidity, i.e., the ability to meet one's money contractual commitments domestically and internationally becomes an essential foundation for understanding decision-making in an entrepreneurial economy.

³ Yet the Great Depression of the 1930s was preceded by a real-estate monetary value market bubble and a stock-market nominal bubble. Moreover, the Great Recession of 2007-10 was preceded by a dot.com monetary bubble and a subprime mortgage real-estate bubble. How is this possible?

⁴ In mainstream macroeconomics, contracts are always made in real terms as no agent is suffering from "the money illusion."

In an uncertain world, by entering into money contracts, decision makers can gain some control over their future cash inflows and outflows. If individuals suddenly believe the future is more uncertain than it was yesterday, then they will try to reduce their contractual cash outflow payments for goods and services today (save more) in order to increase their liquidity position so as to be better able to cope with the more feared uncertain future. If, however, many people suddenly think the future is more uncertain, then the cumulative effects of them all reducing their spending on the products of industry will create a significant market decline for the output of business firms. Faced with this decline in market demand, businesses are likely to reduce their hiring of workers.

The primary function of well organized and orderly financial markets is to provide liquidity so that holders of financial assets traded on such markets “know” they can make a fast exit and liquefy their portfolio holdings at a price close to the previous market price. For business firms and households, the maintenance of one’s liquid position is of prime importance if insolvency and bankruptcy are to be avoided. In our world, bankruptcy is the economic equivalent of a walk to the gallows.

In our society, no one can be too handsome or too beautiful or too liquid. As long as the future is uncertain, enhancing our liquidity position now to cushion the blow of any unanticipated adverse events that may occur down the road is an understandable human activity. The more one fears the uncertain future, the bigger the size of the cushion desired.

Post-Keynesian theory emphasizes that for a financial market to be a truly liquid market, the market must be well organized AND orderly. For orderliness, there needs to be an institution—a market maker—that has sufficient resources to continue buying and thus maintain orderliness when all others are making a fast exit. Often the market maker is a private-sector institution. If this market maker’s own resources are insufficient to maintain orderliness when there is a “herd behavior” rushing for the exits, then trading is suspended for a time (called a circuit breaker) to let the market maker obtain additional resources and/or the panic recedes. Finally, the central bank may have to become the market maker of last resort, either directly or through providing resources to the market maker to restore orderliness.

In 2007, the American markets for mortgage-backed derivative financial assets were well organized by private investment bankers, but these derivative markets lacked any market maker that was willing to stay the course to maintain orderliness. Nevertheless, these mortgage-backed instruments had been advertised to be “as good as cash,” i.e., perfectly liquid (and triple-A rated).

Banks and other financial institutions around the globe held these “liquid” derivatives for their potential higher yields and alleged safety. When the sub-prime mortgages in some of these derivatives went into default, the market for mortgage-backed derivatives collapsed. Holders of these financial derivative assets tried to make a fast exit at a time when no one would buy what they were so eager to unload. The loss of liquidity initially for a few of these derivative securities panicked the market, causing a cascading effect for other derivative securities that had been previously thought to be very liquid. There were not enough remaining bulls to offset the rush of the bears. With no apparent market value, the mark-to-market accounting rule threatened the balance sheets of many financial institutions with insolvency and bankruptcy. The result was financial collapse and crisis. In such a scenario, without the market maker of last resort, i.e., the central bank, stepping in, financial collapse is inevitable.

In contrast, according to orthodox theory, financial markets are always efficient, since households, business firms, and nations have statistically reliable knowledge of the future, including their commitments regarding all future contractual cash inflows and outflows. Self-interested and efficient decision makers, therefore, would never enter into a contract that requires a future payment obligation that they could not meet.⁵ No one in such a classical economic world would ever default on his contractual obligations. Yet in the real world, households and companies, and even local (sovereign) governments, do default on their contractual obligations.

Since efficient-market theory, by assumption, eliminates the possibility of people defaulting on their contractual obligations, it should be obvious that this theory (1) can neither logically explain what the relationship was between the US subprime-mortgage default meltdown and the global financial crisis that began in 2007, nor (2) can it provide any policy guidelines to resolve the problem, other than to recommend leaving the problem to the free market and flexible exchange rates to work out, all the while proclaiming that in the long run, the global economy will right itself—even if “In the long run, we are all dead.”

5. The International Setting

In an international setting, such as that of the Euro, if the ECB does not act as the market maker of last resort to restore order in the markets where Euro-zone government bonds are traded, then whichever government is under at-

⁵ Thus the Walrasian system presumes all spot and forward contracts are settled and paid for at the initial period of time, and all spot and forward market prices are market clearing.

tack will find its cost of borrowing excessively high. To avoid this problem, such a nation must strive for an over-abundant accumulation of foreign reserves if it wants to be sure of having enough liquidity to meet all possible future international contractual obligations.

Let us explore further this debt-liquidity problem on an international basis. Suppose a nation is running persistent trade deficits that are quickly depleting its foreign reserves. If the nation has its own currency, then, it is argued, the free market will force devaluation. This will make the deficit country's industries "more competitive," and exports will rise and imports decline. Accordingly, some argue the solution to the Greek deficit problem is for it to exit the Euro and bring back the drachma, only to devalue it soon afterward in order to make Greek industries more competitive. [Alternatively, if Greece does not exit the Euro, then it should adopt a stringent austerity program that will cause much worse domestic unemployment. The average Greek wage in Euros will drop significantly, making national industries more competitive.]

In this international classical economics view, countries should solve their debt problems and stimulate growth by making their industries more competitive vis-a-vis foreign counterparts. This will up exports and reduce imports, stimulating growth in domestic industries. Unfortunately, industries in the former trade-surplus nation(s) must become less competitive as they lose markets at home and abroad to the now more competitive Greek companies. These less competitive enterprises may even become so unprofitable that they end up going bankrupt merely because the Greeks have devalued. To help its now less internationally competitive businesses, the former trade-surplus nation may also lean toward devaluation. Such competitive devaluation was marked the 1930s and were known as "exporting your unemployment."

Keynes noted [1936, pp. 338-339] that the argument for free trade is likely to encourage policies that promote "an immoderate competition for a favorable balance that injures all alike."⁶ So, just as oversaving by individuals in a closed economy can lead to economic depression, attempts to run a favorable balance of trade that leads to excessive accumulation of foreign reserves (nation's savings) can depress the global economy.

Let me further remind you of some comments Keynes made about trade and the international payments system. First, what is necessary for each nation if it is to pursue a full-employment prosperity policy is an autonomous rate of interest domestically set without any preoccupation with international compli-

⁶ President Obama has indicated that he would adopt policies to double US exports by the year 2014 by making US industries more competitive. At whose expense?

cations [Keynes, 1936, p. 349]. Consequently, a policy of capital controls may be required in order to pursue a domestic full-employment target. No country should let other countries' economic conditions and policies adversely affect its own striving for full employment.

Second, Keynes declared that, except for natural resources and climate-related industries, the law of comparative advantage is not important. For "an increasingly wide range of industrial products....[e]xperience accumulates to prove that most mass-production processes can be performed in most countries and climates with equal efficiency" [Keynes, 1933, p. 238]. Therefore, off-shoring and outsourcing may be detrimental to the real income of a nation's workers.

6. Reforming The World's Money: The Bretton Woods Experience And The Marshall Plan

Too often, economic discussions over what would constitute an ideal international payments system, one that would eliminate persistent trade and international payment imbalances, have been limited to the pros and cons of fixed vs. flexible exchange rates. US Treasury Secretary Geithner apparently believes if the Chinese would only let the free market decide the value of the yuan versus the US dollar, the problem of the US's huge trade deficit with China would disappear. In championing the argument for flexible exchange rates, classical theorists assume that the price elasticities of the demand for imports and exports will meet the Marshall-Lerner condition, at least in the long run. For example, in the book by Abel and Bernanke [1992, p. 50, emphasis added] it is stated that

"[a] fall in the exchange rate tends to reduce net exports in the short run....After consumers and firms have had more time....the Marshall-Lerner condition is likely to hold, and a fall in the exchange rate is likely to lead to an increase in net exports."

The question of whether the Marshall-Lerner condition is "likely" to hold may have some importance in deciding whether a pro-flexibility exchange-rate policy is warranted, even in the long run. Financial and economic history since the end of the Second World War, plus Keynes's revolutionary liquidity analysis, indicates that more is required if a mechanism is to be designed to do away with constant trade and international payments imbalances while simultaneously promoting global full employment, rapid economic growth, and a long-run stable international standard of value.

For more than a quarter of a century (1947-73) after the war, nations operated under the Bretton Woods Agreement, which was a fixed, but adjustable, exchange-rate system where, when necessary, nations could invoke widespread limitations on international financial movements (i.e., capital controls). However, since 1973, the conventional wisdom of economists and politicians has been that governments should liberalize all the financial markets under their control to permit international capital to flow unfettered within the framework of freely flexible exchange rates.

In contrast to this belief in the desirability of liberalized international financial markets, Keynes's position at the Bretton Woods conference suggested an incompatibility thesis. Keynes argued that free trade, flexible exchange rates, and free capital mobility across international borders would be incompatible with the economic goal of global full employment and economic growth.

Indeed, between 1947 and 1973, policymakers in their actions implicitly recognized Keynes's 'incompatibility thesis.' This period was a "golden age" of sustained economic growth in both developed and developing countries. Indeed, during the 1947-73 period of fixed, but adjustable, exchange rates, the free world's economic performance in terms of both real growth rates per capita and price-level stability was historically unprecedented.⁷ Moreover, global economic growth rates during the earlier gold standard-fixed exchange rate period, although worse than this Bretton Woods record, generally were better than the post-1973 global experience, when the conventional wisdom became "liberalize markets to achieve flexible exchange rates." The contrast could not be starker: the economic calmness and stability before 1973 versus the troubled picture after 1973, when many OECD member countries struggled with stubbornly high rates of unemployment and wrestled with bouts of inflation and slow economic growth, while their counterparts in the developing world faced heavy debt burdens constricting growth and/or outright stagnation (and even falling real GNP per capita), culminating most recently in a rapid international financial collapse.

The significantly superior performance of the free world's economies during the 1947-73 fixed exchange-rate period compared to the earlier gold standard fixed-rate period suggests that there must have been an additional condition besides exchange-rate fixity that contributed to the unprecedented growth during the latter period. That additional condition, as Keynes explained in developing his "Keynes Plan", required that any creditor nation that regularly ran trade surpluses had primary responsibility for reversing such imbalances.

⁷ See Adelman [1991].

The Marshall Plan (as explained below) was an instance where the creditor nation adopted the responsibility that Keynes had suggested was required.

7. Keynes, Free Trade, And An International Payments System That Promotes Full Employment

To reduce both entrepreneurial uncertainties and the possibility of massive currency misalignments in any fixed exchange-rate system, Keynes recommended the adoption of a fixed, but adjustable, exchange-rate system. More importantly, Keynes argued that the "main cause of failure" of any traditional international payments system—whether based on fixed or flexible exchange rates—was its inability to actively foster continuous global economic expansion whenever repeated trade imbalances arose among trading partners. This failure, Keynes [1941, p. 27] wrote,

"can be traced to a single characteristic. I ask close attention to this, because I shall argue that this provides a clue to the nature of any alternative that is to be successful.

It is characteristic of a freely convertible international standard that it throws the main burden of adjustment on the country that is in the debtor position on the international balance of payments".

Accordingly, any essential improvement in any international payments system demands transferring the onus of adjustment from the debtor to the creditor position. This transfer would substitute an expansionist pressure on world trade for a contractionary one [Keynes, 1941, pp. 29-30]. Specifically, to achieve a golden era of economic development, Keynes called for combining a fixed, but adjustable, exchange-rate system with a mechanism for requiring any nation frequently "enjoying" a favorable balance of trade to undertake most of the effort necessary to eliminate this imbalance, while "maintaining enough discipline in the debtor countries to prevent them from exploiting the new ease allowed them" [Keynes, 1941, p. 30].

After World War II, the war-torn capitalist nations of Europe had sustained so much damage that they found themselves unable to feed their populations with their own remaining resources; nor could they begin to rebuild their economies. To accomplish those goals, they would have had to run huge import deficits with the United States to get the necessary imports. For this to happen, under a *laissez-faire* system, it would have been necessary for the US to provide enormous loans to finance the required shipments of US exports to Europe. The resulting European indebtedness would have been so burdensome that it was unlikely that, even in the long run, the European countries could ever have serviced it.

The Keynes Plan required the United States, as the obvious leading creditor nation, to accept the lion's share of responsibility for curing the international financial ills associated with Europe's postwar need for American goods. Keynes estimated that the European nations might need imports in excess of \$10 billion to rebuild their economies. However, the US representative to the Bretton Woods Conference, Harry Dexter White, rejected the Keynes Plan, arguing that Congress would only be willing to provide, at most, \$3 billion toward this rebuilding effort.

Instead, the White Plan created the International Monetary Fund (IMF), whose function it would be to provide short-term loans to nations running trade deficits. These loans were supposed to give the debtor nation time to tighten its belt and get its economic house in order. Under the White Plan, the US was to contribute a maximum of \$3 billion to the IMF's lending facilities. White's plan also established another lending institution, now called the World Bank, that would borrow funds from the private sector. These funds would then be used to provide long-term loans for rebuilding capital facilities and making capital improvements, initially in the war-torn countries of Europe and later in the less developed countries. White's plan was basically the institutional arrangements later adopted at the Bretton Woods Conference.

Immediately after World War II, out of a fear of Communism finding fertile ground to spread in Western Europe among desperate electorates leery of servicing huge loans to the IMF and the World Bank, the US came up with the now-legendary Marshall Plan. In essence, the Americans had accepted the central point of the Keynes Plan, namely, that it is in the best interest of all nations if the leading creditor nation bears the biggest burden of reducing trade imbalances and international payments adjustments. As a result of the Marshall Plan, the US and its major trading partners experienced unprecedented and long-lasting rates of real economic growth from the end of the Second World War until the early 1970s. Despite White's declaration that Washington would not be willing to come up with more than \$3 billion to straighten out the international payments mess, the Marshall Plan ended up providing \$5 billion in foreign aid over 18 months and a total of \$13 billion over four years. The Marshall Plan was essentially a four-year gift of \$13 billion worth of US exports to the war-devastated countries of Western Europe.

The gift to Europe represented by the Marshall Plan amounted to approximately 2 per cent of the Gross Domestic Product of the United States for the four years spanning 1947 to 1951. Despite this giveaway of national income, however, there was no real sacrifice required of Americans, as the remaining per capita income was significantly greater than pre-war levels. In fact, the

resulting boost in exports of US-made products (that were enabled by the Marshall Plan funds that had been handed to the Europeans) led to strong boosts in employment in American export industries just as several million men and women were being discharged from the US armed forces and entering the national labor force looking for jobs. For the first time in its history, the United States did not suffer from a severe recession immediately after the cessation of a major war. On the contrary, the US and most of the rest of the world experienced an economic "free lunch" as both the potential debtor nations and the creditor nation scored tremendous real economic gains on the back of the Marshall Plan.

By 1958, however, although the US still had an annual surplus in its exports of goods and services, to the tune of more than \$5 billion, the federal government's foreign-policy commitments led to outflows of funds in the form of foreign and military aid exceeding \$6 billion, while there was a net private capital outflow of \$1.6 billion.⁸ The postwar US assumed perpetual surplus on international payments was at an end.

As the US's current account swung into the red in 1958, other nations began to experience payments surpluses. These credit-surplus nations did not spend their entire dollar windfalls on foreign goods and services. Instead, they used a portion of it to build up international liquid assets in the form of gold reserves obtained from the US.⁹ This trend accelerated in the 1960s, partly as a result of ever-rising American military and financial-aid budgets in reaction to the construction of the Berlin Wall in 1961 and later because of the US's involvement in Vietnam. At the same time, a rebuilt Europe and Japan became important producers of exports in their own right, making the rest of the world less dependent on US products.

Still, the United States managed to maintain a positive merchandise trade balance until the first oil price shock in late 1973. More than offsetting this for most of the 1960s, however, were foreign and military aid plus net capital outflows, yielding an overall deficit for the United States in its balance of payments. The Bretton Woods system had no way of automatically forcing the emerging surplus nations to stop accumulating dollar foreign reserves and instead step into the creditor adjustment role that the US had been playing since 1947. None of them volunteered to play this altruistic role, either. Instead, the governments lucky enough to be earning surpluses internationally went on converting a portion of their annual dollar earnings into demands for gold bullion from the US government, which it was legally bound to meet.

⁸ Figures obtained from the US Bureau of Census [1959, p. 870].

⁹ For example, in 1958, the US lost over \$2 billion in gold reserves to foreign central banks.

The seeds of the destruction of the Bretton Woods system and the golden age of economic development were now being sown as the surplus nations drained gold reserves from the United States.

When the US suddenly closed its gold window and unilaterally withdrew from Bretton Woods in 1971, the last vestige of Keynes's enlightened international monetary approach was lost.

8. Changing The International Payments System

The 1950-73 global golden age of economic development required international institutions and US foreign-aid policies that operated on principles inherent in the Keynes Plan, i.e., with the creditor nation accepting prime responsibility for righting international payments imbalances. The formal Bretton Woods agreement, however, did not require creditor nations to take such actions. Moreover, since 1973, the world's financial system has evolved into one where international payments considerations are often paramount and thus impede the prospects for rapid economic growth in many of the developed countries while severely constraining the growth of the least developed countries (LDCs).

It is possible to update Keynes's original plan while retaining his principles for a postwar international monetary scheme that will promote global economic prosperity. For Keynes wrote [1941, pp. 21-2]: "to suppose [as classical theorists do] that there exists some smoothly functioning automatic [free market] mechanism of adjustment that preserves equilibrium if only we trust to methods of *laissez-faire* is a doctrinaire delusion that disregards the lessons of historical experience without having behind it the support of sound theory."

In the 21st century's interdependent global economy, a substantial degree of economic cooperation among trading nations is essential. The original Keynes Plan for reforming the international payments system called for the creation of a single Supranational Central Bank. In the past few years, the ECB has shown that such a supranational bank's management may not understand what policies are called for. For my part, I have developed a proposal for an international monetary clearing union [IMCU] institution. This is a more modest proposal than the original Keynes Plan, although it operates under the same economic principles laid down by Keynes.

My IMCU plan is aimed at obtaining an acceptable international agreement (given today's political climate in most countries) that does not require any nation to surrender control of either its local banking system or its domestic monetary and fiscal policies. Each nation will still be able to chart the

economic destiny that it considers best for its citizens without fear of importing deflationary repercussions from trading partners. No country, however, will be able to export any domestic inflationary forces to its international partners.

What is required is a closed, double-entry bookkeeping clearing institution to keep the payments “score” among the national trading parties; to make this work, there would have to be a set of mutually agreed-upon rules that would outline the creation and redirection of international liquidity while maintaining the purchasing power of the institution’s synthetic international currency. The eight provisions of the international clearing system suggested below are designed:

[1] to prevent a lack of global effective demand¹⁰ due to a liquidity problem arising whenever any nation(s) accumulates excessive idle reserves.

[2] to provide an automatic mechanism for placing the major burden of correcting international payments imbalances on the surplus nations,

[3] to provide each nation with the ability to monitor and, if desired, to control movements of flight capital, tax-evasion money movements, earnings from illegal activities, and even funds that finance terrorist operations,¹¹ and finally

[4] to expand the quantity of the liquid assets used in settling international contracts (the asset of ultimate redemption) as global capacity warrants while protecting the purchasing power of this asset.

There are eight major provisions in this clearing-system proposal. Although I probably will not have enough time to discuss them all in my oral presentation, I note here that the most important proposal is number 6.

The eight provisions are:

1. The unit of account and ultimate reserve asset for international liquidity is the International Money Clearing Unit (IMCU). All IMCU's can be held only by the central banks of nations that abide by the rules of the clearing union system. IMCUs are not available to be held by the public.

2. Each nation's central bank or, in the case of a common currency (e.g., the Euro), a currency union’s central bank, is committed to guarantee one-way

¹⁰ Williamson [1987] recognizes that when balance of payments "disequilibrium is due purely to excess or deficient demand," flexible exchange rates *per se* cannot facilitate international payments adjustments.

¹¹ This provides an added bonus by making tax avoidance, profits from illegal trade, and funding terrorist operations more difficult to conceal.

convertibility from IMCU deposits at the clearing union into its domestic currency. Each central bank will set its own rules regarding making available foreign monies (through IMCU clearing transactions) to its own bankers and private-sector residents.¹² Ultimately, all major private international transactions clear between central banks' accounts in the books of the international clearing institution.

The guarantee of only one-way convertibility permits each nation to institute controls and regulations on international capital fund flows if necessary. There is a spectrum of different capital controls available. Each nation is free to determine which capital controls is best for its residents.

The IMF, as lender of last resort during the 1997 East Asian contagion crisis, imposed the same conditions on all nations requiring loans for international liquidity purposes. The resulting worsening of the situation should have taught us that in policy prescriptions, one size does not fit all situations. Accordingly, the type of capital regulation a nation should choose from the spectrum of tools available at any time will differ depending on the specific circumstances involved. It would be presumptuous to attempt to catalog what capital regulations should be imposed for any nation under any given circumstances. Nevertheless, it should be stressed that regulating capital movements may be a necessary but not sufficient condition for promoting global prosperity. Much more is required.

3. Contracts between private individuals in different nations will continue to be denominated in whatever domestic currency is permitted by local laws and agreed upon by the contracting parties. Contracts to be settled in terms of a foreign currency will therefore require some publicly announced commitment from the central bank (through private-sector bankers) to make available foreign funds to meet such private contractual obligations.

4. The exchange rate between the domestic currency and the IMCU is set initially by each nation's central bank—just as it would be if one reinstated an international gold standard. Since private enterprises that are already engaged in trade have international contractual commitments that would span the changeover interval from the current system, then, as a practical matter,

¹² Correspondent banking will have to operate through the International Clearing Agency, with each central bank regulating the international relations and operations of its domestic banking firms. Small-scale smuggling of currency across borders, etc., can never be completely eliminated. But such movements are merely a flea on a dog's back—a minor, but not debilitating, irritation. If, however, most of the residents of a nation hold and use (in violation of legal tender laws) a foreign currency for domestic transactions and as a store of value, this is evidence of a lack of confidence in the government and its monetary authority. Unless confidence is restored, all attempts to restore economic prosperity will fail.

one would expect, but not demand, that the existing exchange-rate structure (with perhaps minor modifications) would provide the basis for initial rate-setting.

Provisions #7 and #8 below indicate when and how this nominal exchange rate between the national currency and the IMCU would be changed in the future.

5. An overdraft system should be built into the clearing-union rules. Overdrafts should make available short-term unused creditor balances at the Clearing House to finance the productive international transactions of others who need short-term credit. The terms will be determined by the *pro bono publico* clearing-union managers.

6. There would be a trigger mechanism to encourage any creditor nation to spend what is deemed (in advance) by agreement of the international community to be accumulated "excessive" credit balances. These excessive credits can be spent in three ways: (1) on the products of any other member of the clearing union, (2) on new direct foreign-investment projects, and/or (3) to provide unilateral transfers (foreign aid) to deficit members. Spending via (1) forces the surplus nation to make the adjustment directly by way of the trade balance on goods and services, while (2) provides adjustment by the capital accounts (without setting up a contractual debt that will require reverse current-account flows in the future) and (3) allows for adjustment directly by the capital-account balance.

These three spending alternatives force the surplus nation to accept the main responsibility for correcting the payments imbalance. Even so, this provision gives the surplus country considerable discretion in deciding how to accept the onus of adjustment; the guiding principle is what it believes is in the best interests of its residents. The provision does not permit the surplus nation to shift the burden to the deficit nation(s) via contractual requirements for debt-service charges independent of what the deficit nation can afford. The important thing is to make sure that continual oversaving¹³ by the surplus nation in the form of international liquid reserves is not permitted, since it could unleash depressionary forces and/or a build-up of international debts so overwhelming as to cripple the global economy of the 21st century.

In the unlikely event that the surplus nation does not spend or give away these credits within a specified time, the clearing agency would confiscate (and redistribute to debtor members) the portion of credits deemed exces-

¹³ Oversaving is defined as a nation persistently spending less on imports plus direct equity foreign investment than the nation's export earnings plus net unilateral transfers.

sive.¹⁴ This last-resort confiscatory action (a 100% tax on excessive liquidity holdings) would be made as a payments adjustment in the form of unilateral transfer payments in the current accounts.

Under either a fixed- or a flexible-rate system, with each government free to decide on how much it will import, some countries will, at times, experience continuing trade deficits merely because their trading partners are not living up to their commitments—in other words, certain other nations may be illegally hoarding a portion of their foreign export earnings (plus net unilateral transfers). By so doing, these oversavers are creating a lack of global effective demand. Under provision #6, deficit countries would no longer have to deflate their real economies in an attempt to reduce imports and thereby reduce their payment imbalances just because others are excessively saving. Instead, the system would seek to remedy the payment deficit by increasing opportunities for deficit nations to sell abroad and thereby work their way out of their deteriorating debtor position.

7. A system to stabilize the long-term purchasing power of the IMCU (in terms of each member nation's domestically produced market basket of goods) can be developed. This requires a system of fixed exchange rates between the local currency and the IMCU that changes only to reflect permanent increases in efficiency wages.¹⁵ This assures each central bank that its holdings of IMCUs as the nation's foreign reserves will never lose purchasing power in terms of foreign produced goods. If a foreign government permits wage-price inflation to occur within its borders, the exchange rate between the local currency and the IMCU will be devalued to reflect the inflation in the local money price of the domestic commodity basket. For example, if the rate of domestic inflation is 5 per cent, the exchange rate would change so that each unit of IMCU could purchase 5 per cent more of the nation's currency.

If, on the other hand, increases in productivity lead to declining production costs in terms of the domestic currency, then the country with this fall in effi-

¹⁴ Whatever "excessive" credit balances that are redistributed shall be apportioned among the debtor nations (perhaps based on a formula that is inversely related to each debtor's per capita income and directly related to the size of its international debt) to be used to reduce debit balances at the clearing union.

¹⁵ The efficiency wage is related to the money wage divided by the average product of labor; it is the unit-labor cost modified by the profit mark-up in domestic money terms of domestically produced GNP. At the preliminary stage of this proposal, it would serve no useful purpose to decide whether the domestic market basket should include both tradeable and non-tradeable goods and services. (With the growth of tourism, more and more non-tradeable goods become potentially tradeable.) I personally prefer the wider concept of the domestic market basket, but it is not obvious that any essential principle is lost if a tradeable-only concept is used, or if some nations use the wider concept while others the narrower one.

ciency wages [say, of 5 per cent] would have the option of choosing either [a] to permit the IMCU to buy [up to 5 per cent] fewer units of domestic currency, thereby capturing all (or most of) the gains from productivity for its residents while maintaining the purchasing power of the IMCU, or [b] to keep the nominal exchange rate constant. In the latter case, the gain in productivity is shared with all trading partners. In exchange, the export industries in this productive nation will receive a greater relative share of the world market.

By devaluing the exchange rate between local monies and the IMCU to offset the rate of domestic inflation, the IMCU's purchasing power is stabilized. By restricting use of IMCUs to central banks, private speculation with IMCUs as a hedge against inflation is avoided. Each nation's rate of inflation of the goods and services it produces is determined solely by (a) the local government's policy toward the level of domestic money wages and profit margins vis-a-vis productivity gains, i.e., the nation's efficiency wage. Each nation is, therefore, free to experiment with policies for stabilizing its efficiency wage to prevent inflation as long as these policies do not lead to a lack of global effective demand. Whether the nation is successful or not in preventing domestic price inflation, the IMCU will never lose its international purchasing power in terms of any domestic money. Moreover, the IMCU has the promise of gaining in purchasing power over time, if productivity grows more than money wages and each nation is willing to share any reduction in real production costs with its trading partners.

Provision #7 produces a system designed to, at least, maintain the relative efficiency wage parities among nations. In such a system, the adjustability of nominal exchange rates will be primarily done (but not always, see Provision #8) to offset changes in efficiency wages among trading partners. A beneficial effect that follows from this proviso is that it eliminates the possibility that a specific industry in any nation can be put at a competitive disadvantage (or secure a competitive advantage) against foreign producers solely because the nominal exchange rate changed independently of changes in efficiency wages and the real costs of production.

As a result, nominal exchange-rate variability can no longer create the problem of a loss of competitiveness due solely to the overvaluing of a currency as, for example, was suffered by the industries in the American "Rust Belt" during the period 1982-85. Even if temporary, currency appreciation independent of changes in efficiency wages can do significant and permanent damage as local industries abandon export markets and lose domestic markets to foreign competitors, and the resultant excess plant and equipment are cast aside as too costly to maintain.

Proviso #7 also prevents any nation from engaging in a beggar-thy-neighbor, export-thy-unemployment policy by pursuing a real exchange-rate devaluation that does not reflect changes in efficiency wages. Once the initial exchange rates are chosen and relative efficiency wages are locked in, reduction in real production costs that are associated with a relative decline in efficiency wages is the main factor (with the exception of provision #8) justifying an adjustment in the real exchange rate.

Although provision #6 prevents any country from piling up chronic excessive surpluses, this does not mean that it is impossible for one or more nations to run persistent deficits. Hence, proposal #8 below provides a program for addressing the problem of recurring international payments deficits in any one nation.

8. If a country is at full employment and still has a tendency toward registering deficits on its current account, then this is *prima facie* evidence that it does not possess the productive capacity to maintain its current standard of living. If the deficit nation is a poor one, then surely there is a case for the richer nations that are in surplus to transfer some of their excess credit balances to support the poor one.¹⁶ If the deficit runner is a relatively rich country, then it must alter its standard of living by reducing its relative terms of trade with its major trading partners. Rules, agreed upon in advance, would require such a case to devalue its exchange rate by stipulated increments per period until the evidence shows that the export-import imbalance has been eliminated without unleashing strong recessionary forces.

If, on the other hand, the payment deficit persists despite a continuous positive balance of trade in goods and services, this indicates that the deficit nation might be carrying too heavy an international debt-service obligation. The *pro bono* officials of the clearing union should bring the debtor and creditors into negotiations to reduce annual debt-service payments by [1] lengthening the repayment period, [2] reducing the interest charges, and/or [3] debt forgiveness.¹⁷

It should be noted that proviso #6 embodies Keynes's innovative idea that whenever there is a persistent (and/or large) imbalance in current-account flows, whether due to capital flight or a stubborn trade imbalance, there must be a built-in mechanism that induces the surplus nation(s) to bear most of the

¹⁶ This is equivalent to a negative income tax for poor fully employed families within a nation. (See Davidson [1987-8]).

¹⁷ The actual program adopted for debt-service reduction will depend on many parameters including: the relative income and wealth of the debtor vis-a-vis the creditor, the ability of the debtor to increase its per capita real income, etc.

responsibility for eliminating the imbalance. A surplus nation must be willing to accept this burden, for only it has the wherewithal to ease the situation.

In the absence of proviso #6, under any conventional system, whether it has fixed or flexible exchange rates and/or capital controls, there can ultimately be an international liquidity crisis (as any country that always has a current-account deficit will see its foreign reserves depleted) that unleashes a global depressionary whirlwind. Thus, proviso #6 is necessary to assure that the international payments system will not have a built-in depressionary bias. Ultimately then, it is in the self-interest of the surplus nation or nations to accept this responsibility, for its actions will create conditions for global economic expansion, some of which must redound to its own citizens. Failure to act, on the other hand, will make a global depression more likely, which will hurt those same citizens anyway.

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