

International Money and Keynes: What Should We Learn from Him for a Sound Key Currency?

MATSUI, Hitoshi

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Abstract

In memory of John Maynard Keynes who departed from this life 70 years ago, this paper critically explains international monetary history, based on his international monetary theory. Different from usual textbooks, this paper explains the collapse of the Bretton Woods gold-dollar system *not* based on the Triffin dilemma proposition. According to Keynes's theory, Triffin's proposition is a fallacy, contradicting Britain's experiences under the pre-1914 international gold standard system. This paper also criticizes Kindleberger's "minority view" and McKinnon's argument on the "N-1" problem, from the viewpoint of Keynes's theory.

Key words: Keynes, Triffin, Bretton Woods system, International gold standard

1. Introduction

In 1946, the next year after World War II ended, the Bretton Woods gold-dollar system started and the famous British economist John Maynard Keynes departed from this life. Since then 70 years have passed till today. This paper explains, in memory of Keynes, the history of international monetary system mainly from the pre-1914 international gold standard system till the end of the Bretton Woods gold-dollar system, based on his international monetary theory.

As is shown in this paper, Keynes's international monetary theory opposes American common theories which are prevalent today in the field of international monetary economics. Historically, this opposition reflects the not-very-good Anglo-American relationship on international monetary affairs before World War II in the process of Britain's decline and the United States' rise as the key-currency country. After World War II, while Keynesian macroeconomics has extensively been accepted by many US economists, Keynes's international monetary theory has *substantially* been ignored or regarded as heterodox by many US economists who have preferred their own international monetary theories convenient for "explaining" US international monetary behaviors. I think, however, that Keynes's international monetary theory *should really* be orthodox in the field of international monetary economics even today and that US international monetary theories presented after World

War II are fallacious academically.

In the following, I explain in Section 2 that Britain before World War I observed a certain principle in supplying the pound sterling to foreigners and that the observance of the principle supported the well-known stable gold-pound convertibility in that era (1880–1913) on the basis of Britain’s small amount of gold reserve. Keynes understood already in his young age the principle’s importance for the soundness of the pound sterling, especially for the stable gold-pound convertibility. I therefore call the principle the *Keynes principle*. Then, in Section 3, I explain that Britain deviated from the Keynes principle after World War I and that the United States didn’t take over the principle in the interwar years between World War I and World War II. In Section 4, I explain how the US dollar was supplied to foreigners under the Bretton Woods system and why the gold-dollar convertibility collapsed, from the viewpoint of Keynes’s international monetary theory. In Section 5, I criticize the Triffin dilemma proposition which many US economists have used in explaining the collapse of the Bretton Woods gold-dollar convertibility. I argue that the proposition contradicts the Keynes principle theoretically and Britain’s experiences before World War I empirically. In Section 6, I criticize the “popularized” version of the Triffin dilemma proposition, Kindleberger’s “minority view”, and McKinnon’s argument on the “N–1” problem. All of these US international monetary theories are convenient to US economists and the US government for excusing or justifying US “balance-of-payments deficits” nationalistically, but are contrary to the Keynes principle academically. Finally in Section 7, I state the conclusion. I think that Appendix at the end of this paper would be useful to some readers for understanding the Keynes principle algebraically.

2. Sterling Standard before World War I

The international monetary system before World War I is usually called the international gold standard system, but it was substantially a sterling standard system (Bloomfield 1959). Under the sterling standard system (1880–1913) the pound sterling was used worldwide as the key currency which was convertible into gold. The most eminent feature of the sterling standard system before World War I was that the gold-pound convertibility was kept stable despite Britain’s small amount of gold reserve compared with the amount of pounds held by foreigners. In 1909, for example, the amount of pounds held by foreigners was about £150 to 200 million (Schumpeter 1939, p. 673),¹⁾ while Britain’s gold reserve was only £31 million at the end of 1908 and £33 million at the end of 1909 (*The Economist*). In that era (1880–1913) Britain observed a certain principle customarily in supplying the pound sterling to foreigners, and Keynes understood already in his young age that the observance of the principle essentially supported the stable gold-pound convertibility on the basis of Britain’s small amount of gold reserve. I therefore call the principle *the Keynes principle*.

The Keynes principle requires that a key-currency country should keep her basic balance (= current-account balance + long-term capital-account balance) near equilibrium every year and supply the key currency to foreigners mainly through her short-term lending.¹⁾ If the key-currency country observes this balance-of-payments discipline, the externally-supplied amount of the key currency is always covered mostly with the key-currency country’s short-term claims on foreigners. Thus, the key-currency country’s central bank can withdraw the key currency from foreigners to the

key-currency country's residents effectively by tightening its monetary policy, in case of necessity. Using this effective monetary policy discretionally, the key-currency country's central bank can keep the key currency adequately scarce (neither over-issued nor under-issued) in the world economy in response to foreigners' demand for the key currency. Then, the adequately scarce key currency *itself* gains foreigners' firm confidence as the means of international payment and store of value, and therefore the key currency's gold convertibility can be kept stable even if the amount of the key-currency country's gold reserve is far smaller than the externally-supplied amount of the key currency. This way of supplying and managing the key currency is the Keynes principle.

Under the sterling standard system before World War I, Britain observed the Keynes principle considerably well, keeping her basic balance near equilibrium every year. In this regard Gomes (1993, pp. 152-153) writes, "In pre-1914 days, Britain usually ran current-account surpluses. Between 1870 and 1914 these averaged 5.2 per cent of its GNP ... However, the indebtedness of the rest of the world rarely led any serious sterling shortage since new foreign investments ... regularly filled the gap ..." That is, Britain in that era kept her basic balance near equilibrium every year, with a surplus in her current account mostly offset by a deficit in her long-term capital account. According to Takizawa (1985, pp. 17-18), incidentally, British bureaucrats in that era (including Keynes in his young days) knew the importance of restraining Britain's long-term capital-account deficit within the amount of her current-account surplus every year, and this knowledge made them call Britain's current-account surplus the amount "available for investment overseas" in their balance-of-payments terminology.

Keeping her basic balance near equilibrium every year, Britain in the sterling standard era supplied the pound sterling to foreigners mainly through her short-term lending. Thus, her international short-term investment position was also kept around equilibrium throughout the era.ⁱⁱⁱ In this regard, Bloomfield (1963, pp. 73-74) writes, "With its (non-gold) short-term assets not differing greatly in size from its liabilities, Britain may have alternately shifted from a net short-term creditor to a debtor position (excluding her gold reserve), and vice versa, under the impact of ... swings in Britain's balance of payments on current account and long-term capital account ..." (words in the parentheses added by the author of this paper, based on the note 1 of Bloomfield, *op. cit.*, p. 71). That is, under the sterling standard system before World War I, Britain always had a sufficient amount of short-term sterling claims on foreigners (besides her small amount of gold reserve) to cover most of the externally-supplied amount of pounds.

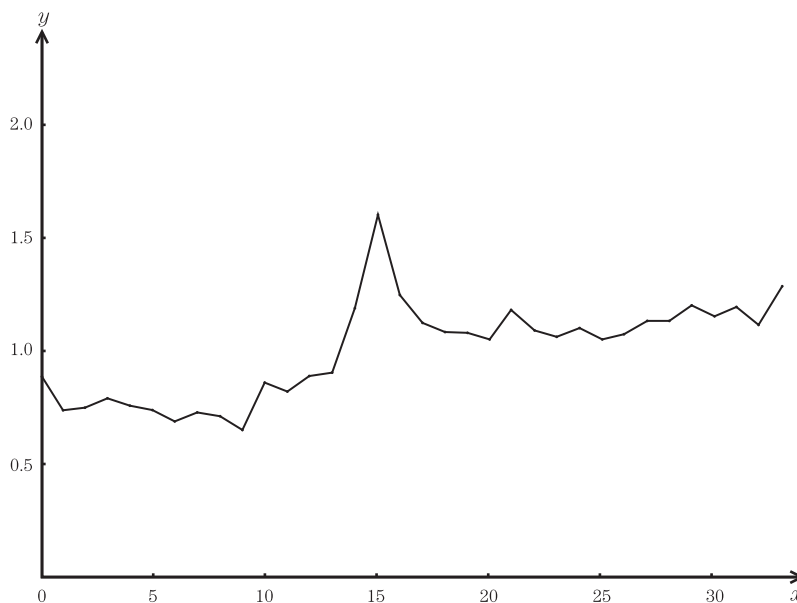
Then, thanks to the sufficient amount of Britain's short-term sterling claims on foreigners, the Bank of England's monetary policy in that era was very effective in withdrawing pounds from foreigners. In this regard, Yeager (1976, p. 306) writes, "There seems little reason to doubt the effectiveness of Bank rate in influencing international flows of capital ... Belief in its effectiveness was epitomized in the old City saying that 7 percent would bring gold from the North Pole." In addition Yeager (*op. cit.*, p. 307) writes, "Mention of 7 percent does not mean that so high a rate was typical. On the contrary, from January 1876 to July 1914, Bank rate moved rather narrowly around an average somewhat above 3 percent." It was this effectiveness of Britain's monetary policy (supported by Britain's sufficient amount of short-term sterling claims on foreigners) that kept the pound sterling adequately scarce (neither over-issued nor under-issued) in the world economy and kept the gold-pound convertibility stable throughout the era (1880-1913) despite Britain's small amount of gold reserve

(see Table 1 and Figure 1 for a slightly increasing trend of Britain's gold reserve in that era).

Table 1 UK gold reserve (1880-1914)

Year	1880	81	82	83	84	85	86	87	88
R	24.24	20.32	20.40	21.57	20.70	20.12	18.82	19.92	19.29
Year	89	90	91	92	93	94	95	96	97
R	17.81	23.47	22.30	24.40	24.49	32.55	43.63	34.16	30.45
Year	98	99	1900	01	02	03	04	05	06
R	29.34	29.34	28.54	32.06	29.78	28.91	29.93	28.53	29.06
Year	07	08	09	10	11	12	13	14	
R	30.75	30.73	32.63	31.36	32.44	30.33	34.98	69.49	

Source: *The Economist*. R is the amount (in £ millions) of gold coins and gold bullion held by the Bank of England at the end of each year (evaluated at the official gold price of £ 4.248 per ounce of fine gold). As for the large value of R in 1895, Feavearyear (1963, p. 331) writes, "The influx of new gold from the Rand coincided with exports from the United States, where the Treasury was obliged by the Sherman Act to purchase large quantities of silver." As for the large value of R in 1914, see the text (Section 2) of this paper.



x is the "index year", defined as the calendar year minus 1880. y is the "standardized reserve amount", defined as R/E , where R is the same as that in Table 1 and E is the mean value of R for the period 1880-1913 ($E = 27.28$). The line of regression of y on x (by OLS) is $y = 0.7403 + 0.0157x$, whose correlation coefficient is 0.71, with its t-value (5.752) indicating a positive correlation at 1% significance level (two-tailed test, the degree of freedom 32).

Fig. 1 UK gold reserve (1880-1913)

Incidentally speaking, the amount of Britain's gold reserve before World War I was small not only compared with the externally-supplied amount of pounds but also compared with other major countries' gold reserves, despite her status as the key-currency country under the duty of gold conversion. At the end of 1909, for example, the amount of Britain's gold reserve was £33 million, with that of France £140 million, Germany £49 million, Austria-Hungary £56 million, and Russia £117 million (*The Economist*). On the stable gold-pound convertibility supported by the small amount of Britain's gold reserve, Feavearyear (1963, p. 314) writes that "contemporaries were torn between criticism of the Bank (of England) and admiration for the efficiency of a system that enabled such vast transactions, both domestic and external, to be handled with so small a reserve" (words in the parenthesis added by the author of this paper).

And, regarding "the efficiency" of the sterling standard system before World War I, Keynes (1914 [1983, p. 279]) writes as follows.

"Great Britain is a creditor nation ... in the sense that she habitually loans to foreign centers large sums of money which are repayable *at short notice*. It is always within her power, therefore, by refusing to renew these loans, to turn the immediate balance of indebtedness in her favor ... All this, as I have said, is a common place. It has been the reason and justification for the Bank of England's holding one of the smallest gold reserves in Europe, while building up on the basis of it the largest volume of business" (italics by Keynes).

That is, Keynes knew already in his young age that what supported the stable gold-pound convertibility on the basis of Britain's small amount of gold reserve was the effectiveness of her monetary policy in withdrawing pounds from foreigners and that what supported the effectiveness of her monetary policy was her sufficient amount of short-term claims on foreigners to cover most of the externally-supplied amount of pounds.

When World War I broke out in July 1914, Britain's international short-term investment position was still well balanced, thanks to her observance of the Keynes principle for many years. Under this well-balanced short-term position of Britain, the threat of war produced a general withdrawal of short-term funds to Britain. Then, because of these capital inflows to Britain, the pound sterling sharply appreciated in the foreign exchange market and her gold reserve sharply increased. That is, the pound sterling appreciated from 4.86 dollars per pound (the Anglo-American mint par before the war) to 6.35 dollars per pound in the last week of July 1914 (Yeager, *op. cit.*, p. 310), and Britain's gold reserve almost doubled from £35 million at the end of 1913 to £69 million at the end of 1914 (*The Economist*).

3. Keynes in Interwar Years

After World War I Britain returned to the gold standard with her pre-war gold parity in April 1925, but she was no longer able to keep the gold-pound convertibility stable. This was because Britain had lost her economic power during the war and she was unable to observe the Keynes principle after the war in supplying and managing the pound sterling as the key currency. That is, in the period from

1925-1930 the annual average deficit of Britain's long-term capital account was £114.2 million, which was 2.58 times as large as the annual average surplus of her current-account (£44.2 million) in the same period (Sayers 1976, pp. 310-313). Britain in that period didn't have a sufficient net-export power of goods and services to offset her long-term capital-account deficit by her current-account surplus every year (at her pre-war gold parity). As a result of these basic-balance deficits in the latter half of the 1920s, the pound sterling was over-issued to foreigners and Britain became a net short-term debtor country by 1930. At the end of 1930, the amount of pounds held by foreigners was £435 million, which was far more than the sum of her gold reserve (£148 million), her dollar reserve (£25 million), and her short-term sterling claims on foreigners (£161 million: Sayers, *op. cit.* p. 354 and Macmillan Report p. 112). Then, because of this net short-term debtor position (especially because of the insufficient amount of her short-term sterling claims on foreigners) Britain was unable to withdraw the over-issued pounds from foreigners effectively by her monetary policy, and eventually in September 1931 the gold-pound convertibility collapsed.

In this process of Britain's deviation from the Keynes principle after World War I, Keynes shifted his emphasis in policy prescription from the maintenance of the pound sterling's international stability to the maintenance of the British economy's domestic stability. Thus, in the 1920s he opposed Britain's return to the gold standard and asserted that Britain should put the pound sterling under flexible exchange rates internationally and a managed currency system domestically, cutting off the fetters of gold (Keynes 1923, 1925). That is, Keynes's prescription for the British economy and the pound sterling after World War I was no longer based on the Keynes principle, and he inclined more and more to such artificial international monies as "S.B.M." and "bancor" in his middle and old ages (Keynes 1930b [1971, pp. 358-359] and Keynes 1941 [1980, p. 72]).

This inclination of Keynes to artificial international monies was, I think, because he knew that Britain could not again supply and manage the pound sterling as the key currency based on the Keynes principle and because he anticipated that the United States would not in the coming era supply and manage the US dollar as the key currency based on the Keynes principle. That is, I think, Keynes's international monetary theory was "distorted" by his nationalism after World War I in the meaning that he didn't actively require the United States' taking over the Keynes principle but instead inclined to artificial international monies for the purpose of protecting Britain's national interest against the United States' seigniorage. As was symbolized by this "distortion" of Keynes's international monetary theory, the Anglo-American relationship on international monetary affairs was not very good in his middle and old ages, reflecting the sharp contrast between Britain's decline and the United States' rise as the key-currency country. This contrast was directly experienced by himself in the Bretton Woods conference (1944). Under such circumstances, Britain's old knowledge (or wise custom) of the Keynes principle (which had essentially supported the stable gold-pound convertibility before World War I on the basis of Britain's small amount of gold reserve) was not taken over by the self-confident United States with a huge amount of gold reserve, unfortunately.

4. Bretton Woods Gold-Dollar System

After World War II the US dollar put itself under an obligation of gold conversion, following the pound

sterling before World War I. But, different from Britain before World War I, the United States after World War II supplied the key currency to foreigners mainly through her basic-balance deficits. That is, in the period 1950–1960, the annual average deficit of US long-term capital account was \$ 1,865 million and the annual average surplus of US current account was \$ 38 million (Yeager, *op. cit.*, pp. 570–571). The United States ran these basic-balance deficits in the 1950s mainly because of her aid and long-term lending to Western Europe and Japan for their reconstruction under the Cold War, and as a result the United States became a net short-term debtor country (excluding her gold reserve) by 1960. At the end of 1960, the amount of US short-term liabilities to foreigners was \$ 21,320 million (of which, \$ 21,208 million was the amount denominated in dollars) and the amount of US short-term claims on foreigners was only \$ 3,590 million (of which, \$ 3,110 million was the amount denominated in dollars), though she still had her gold reserve as much as \$ 17,804 million (*Federal Reserve Bulletin*).

Owing to US basic-balance deficits in the 1950s, Western Europe and Japan were reconstructed and the so-called “dollar shortage” phenomenon (which had lasted since just after World War II) disappeared around 1960. But, the so-called “dollar glut” soon appeared at the beginning of the 1960s.^{iv)} Thus, US policy makers tried to reduce the externally-supplied amount of dollars by tightening her monetary policy. But, because of the net short-term debtor position (excluding gold reserve) of the United States, her monetary policy was ineffective in withdrawing dollars from foreigners. On this ineffectiveness of US monetary policy in the 1960s, Ozaki (1972, p. 25) writes from the viewpoint of the Keynes principle as follows. “Only if a reserve center keeps a short-term creditor position (in the meaning that the key-currency country holds a sufficient amount of non-gold external short-term assets to cover most of the externally-supplied amount of the key currency) can her monetary policy work as effectively as Britain’s Bank-rate policy before World War I. This is well known as a historical fact, but is not understood sufficiently as a present matter” (words in the parenthesis added by the author of this paper).

Then, US policy makers took such abnormal measures as Operation Twist (1961) and Interest Equalization Tax (1964) in order to restrain short-term capital outflows from the United States and facilitate short-term capital inflows to the United States. But these measures had little effect on US international short-term capital flows, and the externally-supplied amount of dollars continued to increase mainly through US basic-balance deficits also in the 1960s as well as in the 1950s. That is, in the period 1960–1970, the annual average deficit of US long-term capital account was \$ 3,796 million and the annual average surplus of US current account was \$ 2,171 million (Yeager, *op. cit.*, pp. 570–571). The United States ran these basic-balance deficits in the 1960s mainly because of her overconsumption, the Vietnam War, and her active FDI (foreign direct investment by private firms). As a result, US short-term debtor position worsened furthermore in the 1960s, and the United States became a heavy net short-term debtor country (*even including* her gold reserve) by 1970.

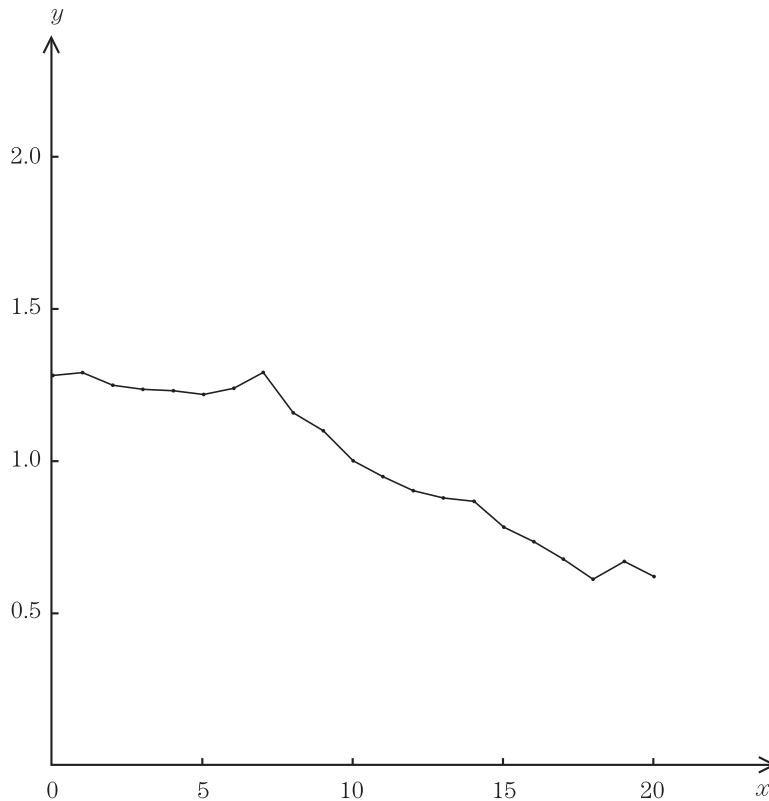
At the end of 1970, the amount of US short-term liabilities to foreigners was \$ 41,761 million (of which, \$41,393 million was the amount denominated in dollars), the amount of US short-term claims on foreigners was only \$ 10,802 million (of which, \$10,192 million was the amount denominated in dollars), and the amount of US gold reserve was \$11,072 million (*Federal Reserve Bulletin*). Because of the persistent net short-term debtor position of the United States under the “dollar glut” in the 1960s, the gold-dollar convertibility was very unstable throughout the decade (see

Table 2 and Figure 2 for a conspicuously decreasing trend of US gold reserve in the 1960s), and

Table 2 US gold reserve (1950-1971)

Year	1950	51	52	53	54	55	56	57	58
<i>R</i>	22.82	22.87	22.25	22.09	21.79	21.75	22.06	22.86	20.58
Year	59	60	61	62	63	64	65	66	67
<i>R</i>	19.51	17.80	16.95	16.06	15.60	15.47	13.81	13.24	12.07
Year	68	69	70	71					
<i>R</i>	10.89	11.86	11.07	10.21					

Source: *Federal Reserve Bulletin*. *R* is the amount (in \$ billions) of gold reserve held by the US Treasury and the Exchange Stabilization Fund at the end of each year (evaluated at the official gold price of \$ 35 per ounce of fine gold).



x is the “index year”, defined as the calendar year minus 1950. *y* is the “standardized reserve amount”, defined as R/E , where *R* is the same as that in Table 2 and *E* is the mean value of *R* for the period 1950-1970 ($E = 17.78$). The line of regression of *y* on *x* (by OLS) is $y = 1.386 - 0.0386x$, whose correlation coefficient is -0.97 , with its t-value (-17.392) indicating a negative correlation at 1% significance level (two-tailed test, the degree of freedom 19).

Fig. 2 US gold reserve (1950-1970)

eventually in August 1971 the gold-dollar convertibility collapsed.

Thus, the Bretton Woods gold-dollar convertibility collapsed because the United States didn't observe the Keynes principle in supplying and managing the US dollar as the key currency. The US un-observance of the Keynes principle in the 1950s was mainly due to the post-1945 circumstances (such as the need to reconstruct Western Europe and Japan under the Cold War through US backup, and the immature international financial market just after World War II) which made it difficult for the United States to keep her basic balance near equilibrium and supply dollars to foreigners mainly through her short-term lending. But the US un-observance of the Keynes principle in the 1960s was mainly due to her ignorance of the principle's importance for the key currency. Around 1960 when the "dollar shortage" changed to the "dollar glut", US policy makers should have converted the main route of supplying dollars from US basic-balance deficits to US short-term lending, by rectifying her overconsumption and restraining her active FDI. Nevertheless, they "benignly neglected" US basic-balance deficits in the 1960s, because they didn't know the importance of the Keynes principle for the US dollar as the key currency.

5. Triffin and Barbarous Relic

As explained in the previous section, the Bretton Woods gold-dollar convertibility collapsed because the United States didn't observe the Keynes principle, especially in the 1960s. For many years till today, however, most US economists have explained the collapse of the Bretton Woods system based on the Triffin dilemma proposition (see, as a recent example, Krugman, Obstfeld, and Melitz 2015, p. 564) despite the below-mentioned sharp contradiction between the Triffin dilemma proposition and the Keynes principle. The essence of the Triffin dilemma proposition is shown in the following passage by Triffin (1960, p. 67).

"The gold exchange standard system may, but does not necessarily, help in relieving a shortage in world monetary reserves. It does so only to the extent that the key currency countries are willing to let their net reserve position decline through increase in their short-term monetary liabilities unmatched by corresponding increase in their own gross reserves. If they allow this to happen, however, and to continue indefinitely, they tend to bring about a collapse of the system itself through the gradual weakening of foreigners' confidence in the key currencies."

That is, Triffin asserts that under any gold-exchange standard system the key-currency country must keep a certain high level of gold reserve ratio in order to keep the key currency's gold convertibility stable, where the gold reserve ratio is the ratio between the amount of gold reserve held by the key-currency country (the numerator) and the amount of the key currency held by foreigners (the denominator). According to him, the key currency's gold convertibility surely collapses someday if the externally-supplied amount of the key currency continues to increase in a growing world economy faster than the amount of the key-currency country's gold reserve and the gold reserve ratio falls below unity indefinitely toward zero.

According to the Keynes principle, however, the gold convertibility of a key currency

can be kept stable even if the gold reserve ratio falls down far below unity, if the key-currency country continues to hold a sufficient amount of short-term claims on foreigners to cover most of the externally-supplied amount of the key currency and her central bank keeps the key currency adequately scarce in the world economy by using its effective monetary policy discretionally in response to foreigners' demand for the key currency. Britain before World War I actually kept the gold-pound convertibility stable in this way despite her small amount of gold reserve. In 1909, for example, the amount of pounds held by foreigners was 4.5 times to more than 6 times as large as the amount of Britain's gold reserve (see Section 2 of this paper), but foreigners regarded the pound sterling as being "as good as gold" and the gold-pound convertibility was kept so stable that "the identity of gold and sterling seemed almost a law of nature" (Yeager, *op. cit.*, p. 299).

As is apparent in the above passage by Triffin, he was entirely ignorant of the Keynes principle. That is, when arguing the stability of a key currency's gold convertibility, Triffin didn't consider the important role of the key-currency country's short-term claims on foreigners. He therefore ignored the crucial difference between supplying the key currency to foreigners through the key-currency country's short-term lending and that through her basic-balance deficits. Thus, simply comparing the amount of the key currency held by foreigners and the amount of gold reserve held by the key-currency country, he asserted that the key-currency country must keep a certain high level of gold reserve ratio in order to maintain the key currency's gold convertibility stable. This *quantitative* emphasis on gold reserve by Triffin is what Keynes (1923 [1971, p. 138]) called a "barbarous relic".

In contrast to Triffin, Keynes attached no importance quantitatively to Britain's gold reserve when arguing the stability of the gold-pound convertibility, as shown in the following passage (Keynes 1913 [1971, pp. 12–13]).

"A drain of gold can only come about if foreigners choose to turn into gold (the) claims which they have against us for immediate payment, and we have no counter-balancing claims against them for equally immediate payment. The drain can only be stopped if we can rapidly bring to bear our counter-balancing claims. When we come to consider how this can best be done, it is to be noted that the position of a country which is preponderantly a creditor in the international short-loan market is quite different from that of a country which is preponderantly a debtor" ("the" in the parenthesis added by the author of this paper).

In this passage, Keynes attaches much importance to the amount of Britain's short-term claims on foreigners, but he doesn't assert that Britain must keep a certain high level of gold reserve ratio in order to keep the gold-pound convertibility stable. For Keynes, the gold-pound convertibility was important merely as a barometer to check the soundness of the pound sterling *qualitatively*, and for that purpose the quantity of Britain's gold reserve was not crucially important. Indeed, as already cited in Section 2 of this paper, he proudly stated in his young days of "the Bank of England's holding one of the smallest gold reserves in Europe, while building up on the basis of it the largest volume of business."^{v)}

Theoretically speaking, under any gold-exchange standard system, the key-currency country's gold reserve ratio can decline indefinitely toward zero without collapsing the gold convertibility,

if the key-currency country observes the Keynes principle steadily for many years and foreigners' confidence in the key currency becomes so firm as to make gold conversion almost unnecessary. Keynes probably desired in his young days that the pound sterling would approach such a *de facto* paper key currency. Needless to say, such a *de facto* paper key currency that would be realized at the final stage of the Keynes principle is entirely different from such a paper key currency that deviated from the Keynes principle and lost gold convertibility because of foreigners' non-confidence.

6. US Deficits and Nationalism

After the Bretton Woods gold-dollar convertibility collapsed, a paper-dollar standard system (called the Smithsonian regime) started in December 1971. However, the paper dollar was not given foreigners' confidence sufficiently, and the Smithsonian regime soon collapsed in March 1973. Since then 43 years have passed till today under the global floating exchange rates which some economists call the international monetary “non-system”, without the key currency's gold convertibility nor other currencies' fixed exchange rates against the key currency.

In the field of international monetary economics, in the meantime, many US economists added a nationalistic argument to the Triffin dilemma proposition in their textbooks, arguing that US “balance-of-payments deficits” were necessary evil for supplying dollars to foreigners, as follows.

“If the United States was allowed to continue running balance-of-payments deficits, eventually there would be a crisis of confidence, as foreigners all tried to cash in their dollars for gold before it was too late, and thereby exhausted the US gold reserve. On the other hand, if steps were taken to end the US deficit, then the rest of the world would be deprived of sufficient liquidity in the form of a steadily growing stock of reserves” (Caves, Frankel, and Jones 2007, p. 381).

I call this added argument (which asserts that US dollars *can* be supplied to foreigners *only* through US “balance-of-payments deficits”) the *popularized* Triffin dilemma proposition, distinguishing it from the original Triffin dilemma proposition (which asserts that the United States needs to keep a certain high level of gold reserve ratio in order to keep the gold-dollar convertibility stable).

The most harmful feature of the popularized Triffin dilemma proposition is the ambiguous use of the term “balance-of-payments deficits”.^{vi)} Because of this ambiguity, many people are led to a misunderstanding that US basic-balance deficits (and even US current-account deficits) were necessary evil for supplying dollars to foreigners in the 1960s. This misunderstanding may be convenient nationalistically to US economists and the US government for excusing US basic-balance deficits (and even US current-account deficits) in the 1960s.

But, academically speaking, the Keynes principle tells us that a key-currency country need not run deficits in her basic balance nor in her current-account balance in order to supply the key currency to foreigners. Britain before World War I (1880–1913) actually supplied the pound sterling to foreigners mainly through her short-term lending, with her basic balance kept near equilibrium and her current-account balance kept in surplus every year, as explained in Section 2 of this paper. Thus, the popularized Triffin dilemma proposition is academically a fallacy, but I think that the proposition

was nationalistically influential on US policy makers as a majority view already in the 1960s when the US government “benignly neglected” US basic-balance deficits in the decade (and US current-account deficits which began to emerge in the last few years of the decade).

Besides the majority view, incidentally, also a “minority view” was presented on US “deficits” in the 1960s by Kindleberger *et al.* (1966 [1981]). Different from the majority view which *excused* US basic-balance deficits as *necessary evil*, the minority view *justified* US basic-balance deficits as *matter of course*. That is, according to the minority view, it is a matter of course for the United States to run deficits in her basic balance (especially in her long-term capital-account balance) because the United States is the world’s “banker” country who can “borrow short and lend long” based on her function of the maturity transformation which Kindleberger *et al.* (1966 [1981, p. 43]) call “financial intermediary services”.

Indeed, as the minority view asserts, a bank (in particular, a commercial bank) can usually borrow short and lend long to a certain extent, owing short-term liabilities in the form of demand deposits and holding less liquid assets in the form of long-term claims on firms. But, the bank can do it without bringing about any run on cash, only within the permissible range of depositors’ confidence which the bank can gain only after its steady observance for many years of the discipline of “borrowing short and lending short” on its business. A world’s “banker” country, likewise, can borrow short and lend long without destabilizing the key currency’s gold convertibility, only within the permissible range of foreigners’ confidence which she can gain only after her steady observance for many years of the Keynes principle, that is, the discipline of “borrowing short and lending short” on the key currency.

From the viewpoint of the Keynes principle, therefore, it is unsound that a key-currency country which has not yet gained such confidence justifies her basic-balance deficits based on her function of the maturity transformation. Indeed, such justification is apt to spoil her balance-of-payments discipline and lead her international investment position far beyond the permissible range of the maturity transformation, toward such a situation that Keynes (1913 [1971] pp. 12-13) called “preponderantly a debtor” in the international short-loan market.

Thus, both the majority view (the popularized Triffin dilemma proposition) and the minority view (by Kindleberger *et al.*) are contrary to the Keynes principle academically, but I think that both views were influential on US policy makers nationalistically (in their “benign neglect” of US “deficits”) and facilitated the United States’ deviation from the Keynes principle in the 1960s. I think furthermore that this nationalistic tradition in US international monetary theories, of excusing or justifying US “deficits” under cover of academism, has long been dominant among US economists not only in the 1960s but also after the collapse of the Bretton Woods system till today, as is shown in the following argument by McKinnon.

“[N]ations typically wish to build up private and public reserve holdings as their economies grow, and to do so they must aim for surpluses ... At least one *major* country must be willing to run deficits so as to provide an offset. The logical choice of country is, of course, the one country whose currency is used to supply international liquidity. The liquidity and redundancy problems can then be handled simultaneously” (McKinnon 1996, p. 154, italics by McKinnon).

In this passage McKinnon argues that the United States “must be willing to run deficits” passively in her balance of payments as the residual N-th country in the world of N countries “so as to provide an offset” to other N-1 countries’ active “surpluses”, though his balance-of-payments concept is as ambiguous as that in the popularized Triffin dilemma proposition.^{vi)}

According to the Keynes principle, however, the United States must *equilibrate* her *basic balance* every year *actively* as the *first country* which has the *top priority* among all the N countries in pursuing balance-of-payments targets, in order to keep the key currency sound. That is, the Keynes principle requires that the United States should take a neutral stance for the “redundancy problem” by equilibrating her basic balance every year and that she should solve the “liquidity problem” by supplying US dollars to foreigners mainly through her short-term lending.

Incidentally speaking, we have in general the following three cases (a), (b), and (c), for the composition of a key-currency country’s basic-balance equilibrium: (a) a surplus in her current account is offset by the same amount of deficit in her long-term capital account, (b) a deficit in her current account is offset by the same amount of surplus in her long-term capital account, and (c) each of her current-account balance and her long-term capital-account balance is zero. Britain before World War I was under the case (a), as explained in Section 2 of this paper. The United States today (which runs a large amount of deficit in her current account every year) should make efforts to come under the case (b), curtailing her current-account deficit to the size which she can offset by her long-term capital-account surplus. If we judge in consideration of the redundancy problem, however, we have the case (c) as the best one. This is because in the case (c) the key-currency country stands neutrally for the redundancy problem not only at the level of basic balance but also at the level of current-account balance.

Anyway, the Keynes principle requires that a key-currency country should keep at least her basic balance near equilibrium every year actively as the *first country*, supply the key currency to foreigners mainly through her short-term lending as the *banker country*, and keep the externally-supplied amount of the key currency at an adequate (neither over-issued nor under-issued) level in response to foreigners’ demand for the key currency, as the *central-bank country*. This discipline for the first country, the banker country, and the central-bank country is the *noblesse oblige* which *any* key-currency country should observe, *whether or not* she is under an obligation of gold conversion for the key currency. The moral scientist Keynes was in his young days proud of his mother country’s observing this *noblesse oblige* as the key-currency country. This sound pride held by young Keynes as a citizen of the key-currency country was the very starting point of his international monetary theory.

7. Conclusion

Keynes was born and grew up as a citizen of the key-currency country before World War I, and departed from this world as a citizen of a *de facto* non-key-currency country after World War II. This drastic change in Britain’s status, which occurred during his life, affected his international monetary theory significantly, and I think that the effect has *still* been significant in the field of international monetary economics, for the following reason.

As explained in this paper, Britain's old knowledge or wise custom of (what this paper calls) the Keynes principle (which had supported the stable gold-pound convertibility before World War I on the basis of Britain's small amount of gold reserve) was abandoned by weakened Britain after World War I, which brought about a chaos of international monetary system characterized by Britain's decline and the United States' rise as the key-currency country. In this chaos, Keynes's international monetary theory was "distorted" by his nationalism, in the meaning that he didn't actively propose a US-dollar standard system worked based on the Keynes principle but instead proposed such artificial international monies as "S.B.M." and "bancor" for the purpose of protecting Britain's national interest against the United States' seigniorage. Under this academic "distortion" of Keynes as a citizen of the declining old key-currency country and under the political "self-confidence" of the United States as a rising new key-currency country, the Keynes principle was not taken over by the United States, unfortunately.

Then, after World War II, under the United States' political dominance of international monetary system, many US economists accepted the Triffin dilemma proposition (both in the original version and in the popularized version) and such theories as Kindleberger's "minority view" and McKinnon's argument on the "N-1" problem. All of these US international monetary theories were contrary to the Keynes principle academically, but were convenient to US economists and the US government nationalistically for excusing or justifying the collapse of the gold-dollar convertibility and US "deficits". As a result, these US international monetary theories are today accepted as common theories in the field of international monetary economics, and the Keynes principle is almost disregarded despite its true excellence and crucial importance as a sound paper-key-currency theory in our modern age after de-monetization of gold.

I hope that this "distorted" situation of international monetary economics today would be rectified and that the knowledge of the Keynes principle would become widespread among many economists in the world, especially in the United States, for the sake of a sound paper-key-currency system in the future.

Appendix: An Algebraic Explanation of the Keynes Principle

The following identity (1) represents a key-currency country's international investment position in a simplified form, with her external assets shown in the left-hand side and her external debts shown in the right-hand side. All the variables in (1) are measured in terms of the key currency. R is the amount of international reserve held by the key-currency country's monetary authority, which includes gold, SDR, IMF reserve position, and foreign currencies. A is the amount of the key-currency country's external short-term (or liquid) assets other than R , and A' is the amount of her external long-term (or illiquid) assets. Likewise, D and D' are respectively the amount of her external short-term debts and the amount of her external long-term debts. Then, the amount of her net external assets N is defined as the difference between $R + A + A'$ and $D + D'$.

$$R + A + A' = D + D' + N \quad (1)$$

Because the country represented by (1) is a key-currency country, A is almost entirely composed of her short-term claims on foreigners *denominated* in the key currency, and D is almost entirely composed of her short-term liabilities to foreigners *denominated* in the key currency. Now, differentiating the identity (1), we have the following identity (2), where Δ means the change (increment in X if ΔX is positive, and decrement in X if ΔX is negative) in each variable in each year. The identity (2) tells us that the amount of D (the externally-supplied amount of the key currency) increases ($\Delta D > 0$) in each year through the following three routes.

$$\Delta R + \Delta A - (\Delta N + \Delta D' - \Delta A') = \Delta D \quad (2)$$

The first route is *the conversion issue*, through which the key currency is given to foreigners in exchange for international reserve assets (mainly gold if the key-currency country is under a gold-exchange standard system) sold or deposited to the monetary authority of the key-currency country ($\Delta R > 0$). The second route is *the lending issue*, through which the key currency is lent to foreigners on a short-term condition ($\Delta A > 0$). The third route is *the paying issue*, through which the key currency is paid or lent on a long-term condition to foreigners by the amount of a deficit (if any) in the key-currency country's basic balance ($\Delta N + \Delta D' - \Delta A' < 0$). Needless to say, ΔN is equal to the balance of current account, and $\Delta D' - \Delta A'$ is equal to the balance of long-term capital account.

Now, if the key-currency country's basic balance is kept in equilibrium every year in a growing world economy, that is, if $\Delta N + \Delta D' - \Delta A' = 0$ in (2) every year in a growing world economy, then the key currency is supplied to foreigners ($\Delta D > 0$) either through the conversion issue ($\Delta R > 0$) or through the lending issue ($\Delta A > 0$), and therefore we have $\Delta R + \Delta A = \Delta D > 0$. That is, $R + A$ increases every year by the same amount as D , which raises the value of $(R + A)/D$ asymptotically toward 1 if the initial value of $(R + A)/D$ is less than 1. Thus, a key-currency country should keep her basic balance in equilibrium every year, if she wants to keep her international short-term investment position in equilibrium including her gold reserve ($R + A = D$).

If, in addition to the paying issue, the conversion issue is also zero every year in a growing world economy, that is, if $\Delta N + \Delta D' - \Delta A' = \Delta R = 0$ in (2) every year in a growing world economy, then we have $\Delta A = \Delta D > 0$ every year. That is, the key currency is supplied to foreigners only through the lending issue every year, which raises the value of A/D asymptotically toward 1 if the initial value of A/D is less than 1. In such a case, thanks to the rising value of A/D , the key-currency country's monetary policy becomes more and more effective year by year in withdrawing the key currency from foreigners. Thus, using the effective monetary policy discretionally, the key-currency country's central bank can keep the amount of D at a neither over-issued nor under-issued level in response to foreigners' growing demand for the key currency.

If under a gold-exchange standard system the key currency is supplied to foreigners in this way (only through the lending issue) and maintained adequately scarce among foreigners in this way (through the key-currency country's effective monetary policy backed with her sufficient amount of A to cover most of the amount of D), then the gold convertibility of the key currency should be kept stable even if the amount of R is negligibly small. This is because foreigners regard the adequately-scarce key currency as being "as good as gold" and the key currency's gold conversion becomes

almost unnecessary. This situation ($A \doteq D$ and $R \doteq 0$) is a *de facto* managed paper-key-currency system, and we call this way of supplying and managing the key currency the Keynes principle.

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Notes

- i) Strictly speaking, the amount of pounds supplied to foreigners through the City's short-term lending was about £150 to 200 million in 1909, according to Hartley Withers' estimation cited by Schumpeter (1939, p. 673).
- ii) In this paper I use the term "capital-account balance" in the traditional meaning which is used in the 4th edition of *Balance of Payments Manual* (published by IMF in 1977).
- iii) I think that Appendix of this paper would be useful to some readers for understanding algebraically in detail the relationship between a key-currency country's basic balance of the flow dimension and her international short-term investment position of the stock dimension.
- iv) As early as just after World War II, in his last article, Keynes (1946 [1980]) predicted that the "dollar shortage" phenomenon would not last long and that the gold-dollar convertibility would become unstable in the near future. In this regard, Harris (1947, p. 169) writes, "Lord Keynes seemed dubious on the theory of dollar scarcity, and expressed the view that dollars in the coming years would be plentiful and, therefore, that gold might flow out of the United States rather than in." As is indicated by this prediction, Keynes didn't expect that the United States would supply and manage the US dollar as the key currency based on the Keynes principle.
- v) The Keynes principle is similar to "the banking principle" of British currency controversy in the former half of the 19th century. This is because both principles attach more importance to non-gold short-term assets than to gold reserve as the backing collateral of paper money, and because both principles emphasize the importance of short-term lending as the main route of issuing paper money (see Takizawa 1980, pp. 170–171 and Matsui 2002, pp. 3–7 in this regard). But, more strictly speaking, different from representative banking-school economists Keynes did not emphasize the impossibility of an over-issue of bank money. That is, he thought that the law of reflux for the banking system could not be a sufficient safeguard against inflation and/or gold drain. Thus, he emphasized the importance of discretionary monetary policy by the central bank, whom he compared to "the conductor of the orchestra" who "sets the tempo" (Keynes 1930a [1971, p. 26]) for commercial banks' lending behaviors. And, for the sake of the effectiveness of the discretionary monetary policy (especially in reducing the money supply) he attached much importance to commercial banks' short-term sound claims on customers. The Keynes principle (which attaches much importance to a key-currency country's short-term sound claims on foreigners) is the international version of this bank-money theory by Keynes.
- vi) The balance-of-payments concept used by Triffin (1960) is the "gross liquidity balance", according to which any decline in US gold reserve ratio is regarded as a "deficit", even if the decline is due to US short-

- term lending of dollars to foreigners (see Devlin 1971 and Matsui 2002, pp. 17–20).
- vii) According to McKinnon (1996, p. 156), “There is no plausible definition of a deficit in the balance of payments of the Nth country which is also a reserve center,” and the United States should “abandon completely any payments targets of its own” and “permit the other N-1 countries in the world to set their own payments targets unhindered.”

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