

# Even inconvertible money is credit money

Theories of credit money in Japanese Marxian economics from the banknote controversy to modern Uno theories

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## abstract

Since the suspension of the gold standard, many have considered that money becomes fiat money with no intrinsic value. Although theories of endogenous money supply assert that commercial bank lending supplies credit money, even they assume that the credit money is a promise to pay fiat money issued by central banks or states.

However, some Japanese Marxian economists have advocated that inconvertible money, including central bank money, is credit money, and not fiat money. Significantly, they distinguish between “inconvertible” and “fiat.”

This paper quotes and translates some theories from the banknote controversy to modern Uno theories in Japan. Then, we argue that the commodity value underlies credit money and that money can take multiple polymorphic forms with respect to the assets backing the value of issued money.

## Introduction

Why can money buy commodities? What is the ground of money’s value?

Marx has clarified that money is a specific commodity by which all commodities express their value. In the 19th century, people thought that money is gold, which has value in itself, and that credit money is a promise to pay the gold money. However, after the suspension of the gold standard, the inconvertible money does not appear to have any value in itself. Nonetheless, here I show theories of credit money in Japanese Marxian economics, which maintain that even inconvertible money is credit money and has commodity value.

Currently, people think that inconvertible money is fiat money thrown from outside the private economy. Although theories of endogenous money supply, such as Post

Even inconvertible money is credit money

Keynesian, assert that commercial bank lending supplies credit money, they assume that the credit money is a promise to pay fiat money issued by central banks or states. However, some Japanese Marxian economists have advocated that inconvertible money, including central bank money, is credit money, and not fiat money. By creating credit money through lending, banks have financial assets that are rights to receive as a part of the proceeds from the commodities in the debtors. As long as the debtors smoothly gain the proceeds, the money issued by the banks has value based on the commodities. Thus, credit money belongs to commodity money.

Considering this way, we can understand the universal reason enabling money to circulate, whether convertible or inconvertible.

This paper is further structured as follows. Section A takes up Tamotsu Okahashi's theory of credit money in the Japanese banknote controversy in the 1950s. Section B discusses Uno Kozo's criticism of Marx and the development of credit money theory in Uno school. Section C discusses the commodity theory of money in modern Uno theory.

## **A. Okahashi in banknote controversy**

“Banknote controversy” arose in Japan from the mid-1950s to the early 1960s.

The gold standard was suspended in the Great Depression of the 1930s. Then, after World War II, the advanced capitalist economies recovered and restored the exchangeability between main currencies. However, the convertibility to gold remained unrestored. Can the currency circulate normally without convertibility? The controversy began with the proposition of Tamotsu Okahashi that “even inconvertible banknotes are credit money, not state paper money.” State paper money is fiat money, which has no value in itself and can circulate only by state force. Although money is not necessarily tangible such as banknotes, Okahashi and his contemporaries mainly treated banknotes as money with finality. Therefore, the banknote in this controversy means money itself.

In the banknote controversy, many disagreed with Okahashi's theory, arguing that inconvertible money is state paper money that can circulate only by state compulsion. Okahashi's argument did not spread. Therefore, some paragraphs of Okahashi's book should be quoted.

### **A. 1. Creation of credit money**

According to Okahashi, credit money arises from bill transactions. In the commodity

economy, obtaining a commodity needs paying money. However, delivering money need not occur at the same time as receiving the commodity. The commodity could also be received first and paid in money after a certain period. The promise to “pay later” is the bill of exchange, which is the basis of credit money. If the bills cancel each other out, then the proper money is no longer needed. Thus, “they act absolutely as money.” (Marx [1981], p. 525)

Okahashi explains the creation of credit money as follows.

In the monetary economy, receiving something must correspond to giving another. There can be no receiving without giving anything. Therefore, a person can receive what deserves his or her contribution only when contributing to society. Such a mutual reward relationship is always strictly secured in the monetary economy. Thus, commodity circulation consists of giving and receiving through money. However, this mutual reward relationship does not necessarily coincide. ... In a particular stage of the development of circulation, the producer can receive something without giving anything. In the production relationship that allows him or her to delay giving for a certain period, a credit relationship enables receiving before giving. Therefore, money becomes a means of payment. (Okahashi [1957], p. 109)

The credit relationship gradually develops with money as the means of payment and provides the bill a monetary function. The bills become the so-called commercial money. Commercial money arises from the mutuality of giving and receiving credit between producers and merchants. Such complicated mutual credit relationships exist in the roots of the bill circulation. Therefore, the bill can circulate as a means of payment or purchase instead of the proper money. No proper money is needed as long as the receivables and debts cancel each other out. In this way, bills can function instead of money because the mutual credit between producers and merchants establishes a corresponding reward relationship between giving and receiving. Thus, in general, commercial bills are the first alternative to the money as a means of payment. (ibid., p. 109-110)

The credit money is, in essence, a bank bill or bank deposit issued through bill discounting and circulates in place of a private bill. Credit money is a payment instrument peculiar to the banking system, based on the circulation of bills, and has developed from commercial money. Just as the money arises from commodity circulation, commercial money arises from developed commodity circulation with credit relation-

Even inconvertible money is credit money

ships. When banks emerge, credit money arises through the lending of credit by banks. (ibid., p. 137)

Okahashi shows that credit money circulates instead of a commercial bill. Then, a commercial bill is used instead of proper money. Proper money is a kind of commodity and is selected among all the commodities. The credit money does not need the proper money as long as it is issued based on bill circulation.

Thus, the matter is not whether convertible or inconvertible but how the banknotes are issued. When they are issued not based on bill circulation, they are non-proper banknotes.

Considering that inconvertible banknotes issued by bill discounts and securities-backed loans can contract depending on the situation of circulation, they can not remain in circulation forever. By contrast, when inconvertible banknotes are thrown into circulation through unproductive public bonds as collateral, they cannot contract but remain in circulation as a legal means of payment forever. Indeed, such inconvertible banknotes remaining in circulation obey the laws of state paper money. Nevertheless, the inconvertible banknote not originally based on the circulation of paper money cannot be the same as state paper money. The proper banknote is “not based on monetary circulation, that of metallic or government paper money, but rather on the circulation of bills of exchange” (Marx [1981], p. 525). Therefore, a proper banknote is a means of circulation peculiar to “commercial circulation” (ibid., p. 529) and not one for general circulation. Nevertheless, banknotes have entered the general circulation as a legal tender in place of state paper money because some of them were issued based on the money circulation. Thus, the problem is not whether convertible or inconvertible but whether based on the bill or money circulation. (Okahashi [1957], p. 208)

Okahashi shows that the nature of banknotes depends on the financial asset that the bank receives at their issuing them.

#### **A. 2. Multiple ways to issue banknotes and three laws of circulation**

Okahashi explains multiple ways to issue banknotes and three laws of circulation.

Although the banknotes are not prescribed as the Bank of Japan’s bills, they are related to different circulations through the different guaranteeing properties. There-

Table A-1 Three laws of money circulation

Laws of circulation	In Marx's " <i>The Capital</i> "	Guaranteeing property. In Okahashi [1957]	Arise from ...
Laws of the circulation of bills of exchange	v.3, p. 525	Commercial bills, bank-accepted bills	Means of payment
Laws of metallic circulation	v.2, p. 192, 400	Securities, gold, non-commercial bills	Means of circulation
Laws of circulation of paper money	v.1, p. 224	State bond, unsecured loan to the state	Metallic circulation

fore, depending on different properties, banknotes flow into circulation according to different laws and are constrained by these laws. Under the gold standard, just because the banknotes are obligated to convert to gold does not mean all the convertible banknotes conform to the same law. Similarly, after suspension of the gold standard, just because the banknotes become inconvertible does not mean all the "inconvertible" banknotes are inconvertible paper money, that is, state paper money. Moreover, conversely, not all the inconvertible banknotes have the same effect on circulation. They differ in the circulation law with respect to its entrance to circulation or the guaranteeing properties. Whether the banknote is legally convertible or inconvertible, the banknote is always tied to and constrained by gold. Therefore, in this sense, no monetary system exists other than the gold standard. Whether the conversion of banknote to gold is legally obligated or suspended does not matter. (ibid., pp. 214-215)

Understanding this claim is challenging, that is, the gold standard exists even without conversion. However, this notion can be understandable by considering that the banknotes can circulate on the basis of the bill circulation without gold conversion. Thus, despite the suspension of the conversion, the gold standard system could continue.

Table A-1 shows the explanation by Okahashi about three laws of circulation.

The money based on the bill circulation increases or decreases, depending on the demand of the commerce. The money based on the metallic circulation arises in exchange for things possessing value, such as gold and securities, which possess value within and without circulation. Money based on the paper money circulation is valued as long as it remains within circulation instead of the metallic money. If its quantity increases more, then its value declines.

Even inconvertible money is credit money

Okahashi describes the three ways as follows.

First, banknotes guaranteed by commercial bills, bank-accepted bills, and other bills rest on the re-discount of commercial bills and are the proper banknotes that follow the law of bill circulation. However, when the bills securing banknotes are not directly based on commercial trade, the banknotes obey the law of metallic circulation. When the bills securing banknotes are insolvent and taken over by the government, the banknotes obey the laws of paper money.

Second, banknotes guaranteed by government bonds do not stand on the general circulation. They follow the laws of paper money circulation. In addition, when banknotes are issued by loans collateralized by state bonds or unsecured loans to the government, they follow the laws of paper money circulation.

Third, the banknotes guaranteed by bullion of gold and silver follow the laws of metallic circulation. Nevertheless, the banknotes by purchasing bullion are still just commercial money. (Okahashi [1957], p. 215)

According to Okahashi, banknotes issued through lending on the securities or the bullion follow the laws of metallic circulation because the banknote just takes over the money that the borrower previously paid to buy the securities or the bullion. In short, no money increases (*ibid.*, p. 195).

The notion that “banknotes by the purchase of bullion are still just commercial money” may be challenging to understand. Considering that commercial money is a direct payment promise by the issuer (*ibid.*, p. 195), we can understand that the banknote issued in exchange for gold is commercial money for the bank. The bank’s liability becomes the credit money when the bank gives credit by handing over its liabilities at sight in exchange for the commercial money of the debtor through bill discount (*ibid.*, pp. 115-116).

### **A. 3. legal tender provision**

Okahashi emphasized that legal tender provision is not a panacea for the circulation of money. The legal tender provision only legally confirms that banknotes based on the circulation of bills are accepted as means of payment. Not all legal tenders can circulate. Okahashi discusses as follows.

The basis of the circulation of monetary substitutes lies in each aspect of circula-

tion. Just as state paper money originates from the circulation of metal, the proper banknotes originate from the circulation of bills and stand on the means of payment of money. From another perspective, considering that the state paper money arises as a function of the means of circulation of money, this money directly enters the general circulation as an intermediary for commodity circulation. However, given that the proper banknotes arise in place of commercial bills, they appear in commercial circulation in the same way as commercial money. They are liabilities at sight, very trusted, have a more comprehensive circulation than personal bills, and appear as if they were cash (general means of circulation). However, banknotes are still just bills, and the circulation of banknotes never stands on the circulation of money. The provision of the banknote as legal means of payment stands on the nature of bill circulation. Banknotes are legally accepted because they circulate based on the bill circulation. They are fundamentally different from the state paper money as proper paper with “compulsory power.” The state paper money does not circulate depending on the fiat of the state. Instead, the metallic circulation enables the state paper money to circulate as a symbol of value in a limited amount. Similarly, banknotes also do not circulate by the provision of legal tender. Instead, the provision is just a “legal confirmation” that the banknote is already widely circulated instead of the money. The legal means of payment and the mandatory circulating power are essentially different. Even if the banknote becomes a legal tender, it neither has “mandatory circulating power” nor loses its essence as a bill. Its nature does not change after the suspension of conversion. In contrast to state paper money, the inconvertible banknotes still circulate on the ground of the nature of bills. (ibid., pp. 124-125)

Banks acquire financial assets and issue banknotes (credit money) as their liability. The asset supports the value of the banknote as a guaranteeing property. If the property is the bill that is certain to be repaid in the future, then the banknote is a proper banknote. However, the banknote backed by other properties is non-proper.

#### A. 4. Neutrality of credit money

Schumpeter maintained that credit creation creates new money as purchasing power from nothing. The producer with a new purchasing power gives birth to a new product or a new production method. Interestingly, Okahashi denied such an effect of credit creation on the real economy and claimed the neutrality of credit money. He explains the

Even inconvertible money is credit money

Fig. A-1 Credit creation in Schumpeter

initial state			
debtor		bank	
assets	liabilities	assets	liabilities
0	0	0	0
production by debtor			
debtor		bank	
assets	liabilities	assets	liabilities
products	debt	claim	deposit

reason as follows.

Credit money as additional money appears through various processes. ... In whatever way it appears, the created credit money is a new form of additional fictitious capital for the issuing bank, as for the portion not guaranteed by gold or cash reserve on hand. However, even if it is privately additional capital, it is socially neither “additional” capital nor additional net demand as extra money. This additional credit money is a claim to the existing social products made by economic development. Although the sums of money so created “appear newly created side by side with the existing sums” (Schumpeter [1951], p.99), there is already a contribution to social products that should correspond to additional credit money. The money has been newly “created” to realize the price of the additional social products. In contrast to Schumpeter’s argument, it is never “certificates of future services or goods yet to be produced” (ibid., p. 101). Moreover, it is not the credit means of payment, specifically “created” without contributing to social products (Okahashi [1957], pp. 173-174).

Fig. A-1 and Fig. A-2 show a comparison between Schumpeter’s credit creation and Okahashi’s denial of credit creation.

According to Schumpeter, the money created by banks allows borrowers to hire workers and buy means of production to make new products. Credit creation has a significant impact on the economic process.

By contrast, as for Okahashi, the commodity that the borrower buys already exists, and newly created credit money realizes the value of the commodity. The new credit



Fig. A-2 Creation of credit money in Okahashi

initial state

debtor		bank		seller	
assets	liabilities	assets	liabilities	assets	liabilities
0	0	0	0	commodities	capital

Credit creation

debtor		bank		seller	
assets	liabilities	assets	liabilities	assets	liabilities
deposit	debt	claim	deposit	commodities	capital

purchase by debtor

debtor		bank		seller	
assets	liabilities	assets	liabilities	assets	liabilities
commodities	debt	claim	deposit	deposit	capital

money only corresponds to the value of the existing commodity. Thus, credit money is neutral to the economic process.

## B. Credit money in Uno school and controversy

### B. 1. Uno's criticism of Marx's credit theory

Logically, Marx started credit theory by dividing one capital into ownership of capital and function of capital. Each becomes a “money capitalist” and a “functioning capitalist” as their personalization. In other words, money capitalists exist apart from functioning capitals. Credit is the lending and borrowing of money capital between the two parties. The relationship between the two determines the level of interest rate. Notably, the interest rate does not follow the same law as the production price of commodities. Marx mainly treated the money supply as exogenous, although he also referred to elastic money supply as fictitious capital (e. g., Marx [1981], p. 589). Marx asserted that money is gold and the source of loan capital is outside the functioning capital. If the money supply is inelastic, then the catastrophic crisis would be easier to demonstrate.

However, Uno criticized Marx for the divide between money capitalists and functioning capitalists (Uno [1977], p. 120). The principle of political economy assumes that each capital tries to maximize its profit. Therefore, it cannot be assumed that the “money capitalists” exist who are satisfied with a lower rate of interest, although they could earn a

Even inconvertible money is credit money

higher rate of profits with their capital.

Instead, Uno argued that parts of the money capital are temporarily idle for various reasons in the capital reproduction and are sources of funds to lend (*ibid.*, p. 110). They lose the use-value for the owner but will be needed soon. Thus, such money capital temporarily becomes a commodity as use-value for others. When the funds (money capital) are lent, its rent is the interest rate. In short, interest is the price for the use of funds for a definite period (*ibid.*, pp. 121-122). Uno, including Marx, assumed that the supply and demand of funds determine the interest rate level. However, in contrast to Marx, Uno emphasized that the loan funds are from temporarily inactive funds in the capital reproduction process and increase or decrease in the business cycle.

Uno further utilized his theory of interest rate to demonstrate the crisis. When the profit rate declines at the end of the boom because of wage increases, idle money capital will decrease, and the interest rate will rise rapidly. Then, when the interest rate increases above the profit rate, a crisis occurs.

Thus, Uno inherited Marx's way of the exogenous money supply, although he noted that banks lend their own banknotes that are convertible into cash on demand (*ibid.*, p. 111).

However, when credit money can increase elastically through lending, money holders need not be supposed as sources of funds. In addition, the interest rate cannot be determined by the supply and demand of money capital. Instead, the rate should be determined by the competition among capitals and the general rate of profit in the capitalist economy.

## **B. 2. Development of the theory of credit creation: Yamaguchi**

Yamaguchi, a theorist of Uno school, argued that credit creation is creating current purchasing power in anticipation of future reflux of money. He theoretically argued that credit creation takes place at commercial credit before bank credit.

He indirectly criticized the concept of fictitious capital of Marx. The debt of a bank beyond the reserve money of the bank is not fictitious, but the whole debt is backed by the claim of banks.

Let us illustrate to make the following explanation easier to understand.

Yamaguchi discusses credit creation as follows.

Recently, even among Marxian economics, credit creation is often used more

Fig. B-1 Bank's balance sheet

assets	liabilities
reserve	deposits
claims	
	capital

than just as a popular word. Its contents are still variously understood by theorists, and its theoretical provisions have yet remained ambiguous. Popularly, credit creation means creating unreserved liability that functions as the purchasing power. In other words, traditionally, the banks increase lending by creating debt (banknotes or deposits) beyond their cash reserves (sometimes called primary deposits). In addition, it has been thought to be unique to bank credit, and its internal relationship with commercial credit has seldom been questioned.

Such a conventional view of the bank's credit creation emphasizes that banks create money beyond their reserve. ... However, even if the created banknotes and deposits exceed its reserves, they are made by loans, such as bill discounts, and backed by the loan receivables, and not cash reserves. In other words, bank liabilities are the purchasing power based on the fact that loan receivables are repaid after a certain period. Therefore, the essence of what is referred to by the term "credit creation" is not the money creation beyond the reserve, which is superficial and less meaningful. Instead, credit creation should be a substantive function of creating current funds by anticipating future acquisition of funds.

Thus, credit creation has already emerged in commercial credit before bank credit, and the internal relationship between credit creation by banks and commercial credit becomes clear. That is, the bank credit only lifts the restrictions on the credit creation through the commercial credit and substitutes for the commercial credit. Commercial credit is the basis of credit creation by banks. The credit creation through commercial credit is more directly anticipating future reflux of funds than that through bank credit. The bank credit also stands on such anticipation, but the anticipation is indirect. Therefore, the bank reserve appears to support the bank credit. For that reason, the conventional view may have emphasized the creation of money beyond reserve money. (Yamaguchi [1984], pp. 44-46)

Even inconvertible money is credit money

Fig. B-2 Commercial credit and bank credit (1): initial state

debtor (capital A)		creditor (capital B)	
assets	liabilities	assets	liabilities
commodity	capital	commodity	capital
		money	

Fig. B-3 Commercial credit and bank credit (2): commercial credit trading

debtor		creditor	
assets	liabilities	assets	liabilities
commodity	debt	claim	capital
materials	capital	money	

Fig. B-4 Commercial credit and bank credit (3): bank credit

debtor		banking capital		creditor	
assets	liabilities	assets	liabilities	assets	liabilities
commodity	debt	claim	deposit	deposit	capital
materials	capital			money	

The difference between commercial credit and bank credit is notable. The debtors' money acquisition in the future backs commercial and bank credit. Nevertheless, bank credit appears to be backed by the bank's reserve.

We consider the substitution of bank credit for commercial credit. At first, we suppose that capital A is short of money reserve because of temporary stagnant sales of its commodities. To continue production, capital A can buy raw materials from capital B in postpaid credit. The assets of capital A increase by the price of raw materials, and its liabilities increase by the same price simultaneously. From another perspective, capital B (seller, creditor) receives claims (commercial bills) on A instead of cash.

The creditor anticipates that the debtor's commodity will be sold and monetized in the future and allows postpaid sales. The creditor does not lend money directly to the debtor.

Subsequently, we suppose that the banking capital buys the claim (discounts the commercial bill) from the creditor and pays with self-addressed liabilities at sight, such as deposits or banknotes.

The deposit currency in the creditor's asset is backed by the claim in the bank's asset. Finally, the deposit currency is backed by the future money from the future sale of the commodity in the debtor's asset. Subsequently, the creditor can buy commodities with the deposits. Thus, credit money emerges from commercial credit and circulates without the proper money.

Consequently, Yamaguchi argues that the circulation of convertible banknotes mainly stands on the smooth repayment of the claims held by the issuer's bank.

Yamaguchi explains the conversion and the credit money.

First, we consider promissory bills and convertible banknotes. Although the bill is materially a piece of paper, it is received by the commodity seller and acts as a de facto means of purchasing. The rationale is that the receiver trusts that the debtor will pay the money in the future. The basis of the trust is the debtor's smooth process of reproduction. The convertible banknotes are received, for the moment, because they are liabilities at sight (money claim), and their payment is trusted. Nevertheless, the basis of trust is that the bank or the banking organization would smoothly receive repayment from their financial assets. More generally, the convertible banknotes can circulate as de facto money, based on the smooth process of social reproduction. (Yamaguchi [2000], pp. 194-195)

### B. 3. Self-contained credit theory of money: Yoshida

Satoru Yoshida had worked for the Japanese Bankers Association for a long time and then became a university professor. He was a practitioner economist rather than a theorist but exchanged with economics theorists, including the Uno school.

Uniquely, he asserts that all the existing money is credit money endogenously issued by bank lending. In addition, he denies other exogenous money, such as gold and fiat money. Usually, the theorists of endogenous money supply assume that fiat money is supplied by central banks or governments, apart from credit money by commercial banks. However, Yoshida argued that the money issued by the central bank is also credit money and not fiat money. Yoshida summarizes as follows.

In modern times, all money (central banknotes, deposit currency) is credit money. (Auxiliary money is not a problem here, although legally referred to as "money"). "Credit" of credit money is "credit" and not "trust." Credit money is money that oc-

Even inconvertible money is credit money

curs and disappears in a credit relationship. However, this definition of credit money is subject to many objections.

Banks provide financial intermediation while creating money as deposits through credit creation. Then, banks must replenish their reserves. The reserve is supplied by the central bank as a bank of banks. (Reserve is needed after. Pre-existing reserve does not enable credit creation. Phillips-type credit creation theory (multiplier theory) is reverse causality.)

For deposits to function as money, systems such as bill clearing and exchange trade are formed (These are deposit transfer systems.)

The essence of a central bank is a “bank of banks.” Banknotes and central bank deposits are only issued through financial transactions. Even inconvertible banknotes are not fiat money.

People get banknotes through the withdrawal of deposits. Deposits are promises to pay banknotes, but deposits must exist first to increase banknotes.

The central bank accommodates the demand for banknotes and central bank deposits. However, how it accommodates (financial adjustment) can determine short-term market interest rates and affect general interest rates, which is the basis of monetary policy. (Yoshida [2008], p. 15)

Interestingly, Yoshida uniquely uses the term “credit.” Usually, “credit” of credit money means “to trust the promise of the bank issuing credit money to pay proper money.” That is, the holder of credit money trusts the bank. However, Yoshida uses the term “credit” to mean “to trust the debtor receiving the credit money to pay off the debt.” That is, the bank trusts the debtor. By interpreting in this way, Yoshida can discuss credit money without any proper money.

The commercial banks are obliged to hold the central bank money preparing for payment of deposits. Then, can the central bank money circulate by becoming fiat money through the legal tender provision? Yoshida goes back to the convertible banknotes and discusses the basis of circulation of central bank money regardless of conversion.

Were the convertible banknotes able to circulate because of convertibility? If so, then inconvertible banknotes could circulate only by the provision of legal tender. However, even if a currency is forced to circulate as legal tender, it could not spread, or even dollarization could occur when suffering from severe inflation. When even in-

convertible banknotes are managed well, they can circulate without any problems. Certainly, convertibility was necessary to enhance the credibility of banknotes but was not the actual basis for circulation the ways to issue banknotes? In short, at first, credit relationships exist in economic transactions. Then, as the substitute of the relation, the credit money is issued, whether a banknote or a deposit currency. In other words, does the valid rationale of circulation exist in the issuance and return of money grounded on reproduction? (Yoshida [2002], p. 78)

“The ways to issue” means that fiat money is issued through government spending, whereas credit money is issued through lending. Fiat money has no backing assets, whereas banknote as credit money holds a backing asset, such as financial claims and bonds. As long as the backing asset is sound, the banknote can circulate.

Even inconvertible banknotes do not lose their debt nature. Here, Yoshida appreciates Nishikawa’s well-known explanation of the debt nature of inconvertible banknotes. Nishikawa noted that the bank’s debt is paid off by banknote holders buying commodities in the market rather than directly requesting the central bank to pay off (Nishikawa [1984], p. 47). Nishikawa assumed that the debt nature of the inconvertible banknote is not a direct relationship between debtor and creditor but the central bank’s debt to the entire commodity society. Based on this explanation by Nishikawa, Yoshida explained as follows.

Price stability (maintenance of currency value) is essential for the issuer of inconvertible banknotes to guarantee its ability to pay off the debt of banknote. Price stability is an obligation of private law for the issuer of inconvertible banknotes to maintain the trust of banknote holders rather than a public obligation. Financial textbooks state that the goals of monetary policy are stabilizing prices, balancing international payments, and maintaining full employment. Nevertheless, the final destination should be stabilizing prices because of maintaining the debt nature of banknotes, including other debts of the central bank. (Yoshida [2002], p. 128)

Just as the commodity producer should guarantee the quality of his commodity, the bank should also maintain the magnitude of the value of the credit money it issues. The magnitude of the value of the money is the reciprocal of prices.

However, Yoshida’s theory has the problem of discussing credit money without ex-

Even inconvertible money is credit money

plaining the money. In short, Yoshida's theory is a "theory of credit money without any theory of money."

#### **B. 4. Yoshida-Yamaguchi controversy**

Yamaguchi criticized Yoshida's theory of credit money as follows.

"The endogenous money supply theory," which Yoshida appears to support, denies that the pre-existing money is lent and maintains that, conversely, money arises by the lending. Indeed, money arises from the loan relationship, and similarly, the modern inconvertible central banknote also comes into existence through the credit mechanism. However, considering that lending is a lending of money, we should first assume the concept of money before the lending. If we consider that money arises from money lending, then we will fall into eternal circular reasoning. After the circular reasoning is cut off, the theory of endogenous money supply can hold. In other words, theoretically, "the cash money is the premise." Nevertheless, this does not mean agreement with the Phillips-style theory of credit creation. (Yamaguchi [2008], pp. 84-85)

In response, Yoshida wrote,

[This criticism by Yamaguchi] shows the theorist's way of thinking, but actually, such cash money never exists. Nevertheless, "theory" resting on such cash money appears to diffuse and would ground credit theory on inconvertible banknotes (fiat money) with mandatory circulating power. Not to say, Yamaguchi would agree with the "theory." Hopefully, an approach "breaking the circular reasoning" will emerge. (Yoshida [2008], p. 24)

#### **B. 5. How to break the circular reasoning of credit money**

As criticized by Yamaguchi, Yoshida's theory of credit money is circular reasoning that "a promise to pay money is money." If credit money is a promise to pay something, then what is this "something"? If we present something, then we can cut off the circular reasoning.

(1) The first way is to "cut off with legal tender." The government stipulates what can pay off the debt between private agents, and the government provides that it is legal



tender. As all the agents owe the monetary debt in the commodity society, the legal tender can circulate even with no value. The government does not necessarily issue it, and the promise to pay it is credit money.

(2) The second is to “cut off by tax collection.” The government stipulates what can pay off tax. Because all the agents owe tax obligations to the government, the means to pay tax can circulate even with no value or with no mandatory circulating power. The government does not necessarily issue it, and the promise to pay it is credit money.

(3) The third is to “cut off with gold money.” As the orthodox theory of value-form shows, gold is selected as a money commodity among all commodities that have value in themselves. Because gold has its value and all agents can exchange all commodities with it, gold can circulate. The promise to pay it is credit money. However, as Yoshida says, gold is no longer money.

(4) The fourth is to “cut off with commodity money,” which emphasizes that the issuer of credit money has financial assets backed by commodity value. We discuss it in the next section.

### C. Commodity theory of money in modern Uno theories

#### C. 1. Credit money as commodity money

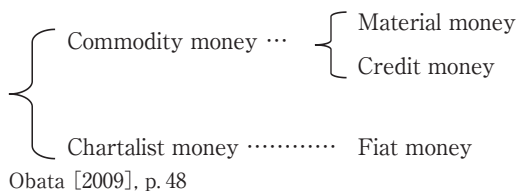
Obata, a current representative theorist of modern Uno school, argues “commodity money in a broad sense” in his textbook of the principle of political economy.

Each commodity has a specific use-value, such as linen and coat, but no general use-value. Given that a commodity has some “specific” use-value, its “general” exchangeability for others is constrained. Conversely, as long as a commodity is “valued,” any commodity qualifies to become money potentially, that is, has the nature of money. Therefore, money is a special commodity based on the nature of money inherent in commodities. The position to think this way is the commodity theory of money. The theory of the value-form of the commodity inevitably reaches the commodity theory of money (Obata [2009], p. 44).

Commodity money consists of material money and credit money. The material money is defined as follows.

Even inconvertible money is credit money

Fig. C-1 Polymorphism of money



Material money is the money that the physical body of the specific commodity becomes as it is (ibid., p. 45).

Obata explains credit money as follows.

The commodity theory of money is often mistakenly said to consider only material money or metallic money as money. Such a misunderstanding arises from equating commodities with things. Originally, commodities are in a particular state of things with use-value for others and always have value on the backside. The commodity theory of money explains money on the basis of the value of commodities. This theory does not argue that money is made of physical material without the value of commodities. Commodity money includes material money but is not reduced to it. Then, the commodity value can be externalized and self-supporting in the form of a monetary claim. Credit money is the money in which the commodity value becomes self-supporting in the form of a claim (ibid., pp. 46-47).

Theoretically, all the commodities express their value by one commodity, and their exchangeability concentrates on it. The commodity becomes commodity money. Nevertheless, money can take two forms, namely, material and credit money. Marx and Uno have demonstrated the material money sufficiently. Obata discusses the polymorphism that money takes multiple forms (Obata [2013]).

He classifies multiple forms of money as follows.

Importantly, commodity money consists of material and credit money. Currently, the fiat money does not circulate except the auxiliary money in a limited amount. Chartalist money stands on the chartalist theory of money. Obata explains as follows.

The idea opposed to the commodity theory of money is the chartalist theory of money. The chartalist theory assumes that even non-commodities can be thrown as

Fig. C-2 Commodities value backing the value of Credit money

borrower		bank		holder of credit money	
assets	liabilities	assets	liabilities	assets	liabilities
commodities	debt	loan	deposit	deposit	capital

money from outside the market. If the chartalist money is made of paper, then it is state paper money. However, regardless of the material, chartalist money is broadly called fiat money. The theory that the agreement among people can create money independently is a kind of the chartalist theory. As credit money and state paper money are usually made of the same material, that is, paper, they are often grouped as paper money, opposed to metallic money. However, such a grouping is a mess because of its appearance. The commodity theory of money can explain material money such as metallic money, and credit money. From another perspective, fiat money, including state paper money, stands on the chartalist theory of money and is conceptually different from credit money. (ibid., pp. 47-48)

Although he shows the basic concept of credit money, unfortunately, he does not sufficiently succeed in a detailed argument.

Here, we develop the theory of credit money backed by the issuer's assets, which continues from (4) the way to "cut off with commodity money" at the end in Section B. The structure of credit money can be illustrated in the balance sheet as follows.

Because credit money is issued through bank lending, the bank holds a claim on the borrower. The borrower has assets that guarantee repayment. The assets may be commodities for sale, production means generating revenue, or the ability to receive wages or tax revenues. The basis of the value of credit money can be easily shown in this static manner as Fig. C-2.

However, elucidating the logical genesis of credit money is challenging, as with the value-form theory. Currently, theorists of the modern Uno school propose several methods to elucidate credit money's genesis based on the value of a set of multiple commodities without gold or fiat money.

### C. 2. Determination of the level of interest rate

Credit money is issued by banks, which are a kind of capital pursuing valorization.

Even inconvertible money is credit money

Therefore, the interest rate should be where banking capitals can gain the general rate of profit. Here, Obata shows the relationship between the interest and profit rates as follows:

$$\text{Bank net profit rate} = \frac{(Q \times i - Q' \times i') - k - d}{P}$$

= the general rate of net profit of industrial capitals,

where  $Q$  is the loan quantity,  $i$  is the lending interest rate,  $Q'$  is the deposit quantity,  $i'$  is the deposit interest rate,  $k$  is the circulation cost (various expenses in bank business),  $d$  is the bad debt loss, and  $P$  is the bank's equity capital (ibid., p. 238).

The interest rate is determined so that the bank's profit rate in this formula is at the same level as the general rate of profit of industrial capitals. In this way, the mechanism of money creation can be explained in a self-contained manner in the capital pursuing profit. However, the circulation cost, net and gross profit rates, and downward dispersion of net profit rate, which modern Uno theories propose, should be known to fully understand this relationship.

## Conclusion

Inconvertible bank money is not fiat but credit money. Fiat money is issued through government spending. The government buys and consumes commodities and does not have assets corresponding to the issued money. By contrast, credit money is issued by a bank's lending. The bank has assets backing the value of money. Similarly, central banks' money is also credit money because it is issued through lending backed by claims to commercial banks, government bonds, and others.

However, the problem does not end here. When approaching from the theory of money, credit money is a "promise to pay the proper money," which leaves an unsolved question of what the proper money is.

From another perspective, when approaching from the credit theory, credit money is what the bank delivers to the borrower in lending. The borrower buys the commodity by diverting it, retrieves it by sales, and finally returns it to the bank. Thus, the credit money is self-contained without the proper money. Okahashi, Yamaguchi, and Yoshida persuasively discussed the mechanism of credit money.

However, they did not answer what money is. Moreover, unfortunately, they substi-

tuted the historical description for a theoretical explanation of credit money. Once, the proper money was gold, and the credit money was a promise to pay the gold money. Currently, the credit money has been inconvertible and functions without conversion.

On the contrary, modern Uno theorists have been attempting to elucidate the theoretical genesis of credit money. In addition, according to the three laws of circulation of Marx's "*The capital*," the coexistence of the proper and non-proper credit money can be reconsidered, as Okahashi discusses. All of these are based on polymorphism of money, which will guide future research.

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Even inconvertible money is credit money

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