

Seasonality, paper monies, and peasant economy:
Revisiting the International Gold Standard System

KURODA, Akinobu (U of Tokyo)

Local monetary demand and global currency supply: a
complementary connection

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1. Background

It is a quite modern invention that single set of currencies exclusively circulate from the layer of public to that of big firms and government in a country. Until the beginning of 20th century, which coincided to proliferation of the 'gold standard system' almost across the world, the homogeneousness of currency had been of minority in global dimension. Plurality of money in history has been already discussed, though not sufficient. However, two directions of argument relating to the plurality have not always crossed. One is called competing money; the other is known as denomination problem. The former focused on the variety of issuer, while the latter paid attention to the difference of functions according to denomination. We may also make a contrast: 'competing monies' was vitalised by theoretical argument whether state should monopolise the issuance of money while 'denomination problem' was invoked by historical findings that small denomination currencies were often in serious shortage.

Actually, they did not always go away with history. The issue of 'competing monies' is current in considering the dollarization in some countries, such as in Latin America. Meanwhile, as the proportion of currency in entire monetary supply has decreased, 'denomination problem' appears to be trivial. However, it does not mean that functional difference between small denomination currency and large denomination currency disappeared. Statistics in 1975 USA makes clear that the proportion of redemption to outstanding in 1 dollar note was far higher than that in 100 dollar note (Table 1). Another survey revealed that demand for small notes has a clear seasonality such as in November and December due to holiday transactions and travel in USA (Kimball). Thus, currency data clearly demonstrate that small denomination notes circulate more frequently but more biased timely. The disproportion among different denomination currencies does little effect to entire economy since monetary supply consists of less currency than early 20th century. However, there must be quite different story if we analyse the period when economic activities were more dependent on currency and seasonality was less offset.

Surveys in recent period also reveal another aspect of currency circulation to which less attention was paid. Though the estimated rate differs by researchers, significant part of currency cannot be accounted for its usages. Houghton estimates 147 billion US\$ out of 277 billion US\$ totally held in USA was unaccounted (Table 2). Some reduces most of it to outflow to abroad, but not persuasive. Thus, even if currency becomes homogenous in a territory, its circulation is still autonomous and far from accounted. Rather it might be better to think that heterogeneous appearance of

currencies in history resulted from unaccounted properties of currency.

For global history study important is that, while, in reality, not a single unit of account and its set of currencies co-existed in an administrative boundary, there was no reason that all currencies had to be supplied within the boundary. Until the end of 19th century the currencies of foreign origin had performed significant roles. The popular circulation of Mexican dollars and the Maria Theresa dollar remained in Asia and Africa still in early 20th century. However, they did not supply the demands for money of all size denomination but worked as complementary interfaces between global and local trade circuit (Kuroda 2007).

This paper will show, firstly, that it was almost ubiquitous that the currencies suitable to different sizes and/or scopes of transaction were supplied by a variety of issuers. Particularly, Asian countries which depended on peasant households were full of local system supplying money to them. Secondly, it will suggest that, spotlighting at seasonality in demand for money and inelasticity in supply of currency, heterogeneous demands for money could be met by different origins of suppliers and consequently the market places could locally stabilise the transactions. Thirdly, it will suggest that global-wide introduction of the system supplying homogenous territorial currencies to the layer of peasant households might have brought an unexpected reaction that seasonal tensions between monetary demand and supply happened to aggregate themselves into a global chain of panics. The order of sections will not always follow the order of the three aims above.

2. International compatible monetary system and peasant economy

From the end of 19th century to early 20th century, except for China and Indochina, monetary system keeping convertibility in terms of gold had spread across Asia, regardless of politically independent like Japan or colonial like India. Needless to say, it did not mean that gold coins actually circulated in the market. Currencies more frequently used hand to hand were coins of silver, copper, and nickel and paper monies of various denominations. Whether the new system based on gold-terms standard worked or not depended on whether non-standard coins worked as subsidiary to standard one and whether paper monies circulated as their face values in terms of the gold standard.

Unlike modern common sense which assumes homogenised circulation of currencies, it was not easy for any regulation to make coins subsidiary and to keep

actual value of paper monies at par with face value. Especially, in the case of economy which depended on peasant activities, the value of their requirement was far lower than the value of gold coin, thus it was a big task to bridge the gap. What made the condition more difficult was the seasonality of monetary demand in peasant-dominating economies. The necessity of supply small denomination currencies to meet fluctuating demand with large seasonality brought the authorities serious difficulty. As long as the problem of small denomination monies with seasonality is concerned, China and Indochina, which had adopted no monetary system based on gold-terms standard, shared it. Before WWI, some scholars paid attentions to monetary tensions caused by seasonality (Kemmerer 1910), after WWI, though seasonal cycles of economy was still a topic for research, the attention to effect of monetary supply almost disappeared (Kuznets 1933)

The period of two decades before WWI accompanied with favourable term of trade for some agricultural products which encouraged their export as industrial resources and foods for wage labourers in industrialised countries. An example is given with the case of organic oil whose demand for chemical industry in Europe rapidly increased. As Table 1 shows, comparing with price of wheat, the prices of palm oil and linseed rose to more extent in London. As naturally expected, the movements of prices in Calcutta and Lagos synchronised with those in London. As agricultural economy in other regions, Asian countries also increased their exports of raw cotton, soya, sesame, rice etc. which were mostly produced by small peasants. The rapidly increasing export of soya bean from Manchuria supplies a typical example (Kaminsih 2011). This international stimulus gave a chance to narrow the gap between trades made in terms of gold and transactions with peasants using smaller monies.

3. Shortage of currency and proliferation of paper money

The rapidly increasing monetary demand for paying to peasants was met by supplies of paper monies and multi-denomination coins which had been unpopular before. The cases of Thailand and Indochina, as shown in Table 2, the increasing issuance of governmental paper money and the Indochina Banknote from the beginning of the 20th century to the 1920's had close relationship to their expanding export of rice. The increase of banknote issuance by the Imperial Bank of Persia was also in tandem with growing export of cotton from Iran. The shortfall of currency enhanced nickel coins to replace copper ones, meanwhile, made Russian Ruble circulated in the northern region.

Russia was the best customer of the Iranian cotton (Issawi, P.389; Jones, pp.126-7, 354-7.). The important was that the spread of paper monies accompanied with disappearance of traditional currencies which had mediated the transactions between peasants. Copper coin in Indochina and cowries in Thailand discontinued to work. Copper cashes with square hole in the centre which dominated Chinese economy for longer than two millenniums came to end in the process (Kuroda 2005).

The issuance of silver certificate, a paper money, continued to increase since its introduction into the Philippines in 1903 (Table 5). This successes of introducing paper monies astonished some contemporary American observers in the Philippines, since, with no reason, they had thought that local people would accept only metallic monies. This baseless belief that locals took money only as metal was completely wrong. As Kemmerer precisely described, 'the Philippines were not upon the silver standard' but 'upon a fiduciary coin standard'. There, silver coins with a wide variety of silver contents circulated at the same value, while the Mexican silver peso appreciated to the extent that whose value at the market 20 percent higher than its bullion value (Kemmerer, pp.252-3). What Kemmerer failed to shed light on was who shared the fiduciary, and that a fiduciary was not available to who traded with another fiduciary.

Paper money was not unprecedented at all in late 19th century East Asia. It is true, after almost four centuries of popular usages, from early fourteenth century to late nineteenth century, no official paper money in China succeeded in get acceptance. However, meanwhile, from, at latest, mid eighteenth century on, privately-issued notes were in circulation. They supplemented shortage of currency in local market, but could not be accepted beyond a county. Meanwhile, banknotes issued by foreign banks and domestic western-style banks became to circulate in China from the late 19th century. However, they were only available within trade ports or particular business circuit closely connecting with foreign trade until early 20th century.

Thus, metallic or fiduciary was a superficial criterion in understanding actual monetary usages in East Asia. The monetary systems actually worked with various currency circuits, a combination of particular currency and trade circuit (Kuroda, 2008a). A same coin circulated with premium in a circuit, while the same item was traded only as metal in other circuit. The dominance of spot trade and strong seasonality in business made any arbitrage difficult to bury the gaps between circuits.

But, apparent changes happen simultaneously across Asia from around 1900. Paper monies began to intrude into nearer circuit to peasant households, while many traditional local currencies of small denomination, such as copper cashes, cowries, disappeared and mechanically-made coins of higher denomination took their places.

Currency circuits were also ubiquitous in Africa until early 20th century. The circulation of the Maria Theresa dollar (Kuroda 2007), cowries (Hogendorn and Johnson) and glass beads (Pallaver) was made along the circuit. However, the same transformation as Asia could be found in Africa too. In the case of the British West Africa in which peasant products, such as palm oil, increased their exports in early 20th century, substitute of new currencies compatible with sterling for traditional currencies, such as cowries, continued to be promoted by the colonial government. The change advanced only reluctantly, but fierce increase of export to Britain during WWI caused serious shortage of currency, and consequently bronze subsidiary of one pence, half pence, and one tenth pence began to prevail (Mcphee, pp.235-8). Table 3 shows rapid rise of palm oil price towards the end of the 1920's.

Quite broadly speaking, comparing with the case of the African colonies, Asian regions had less restriction by home country against supplying currency.

4, Seasonality, peasant economy, and paper money

Until the breakout of WWI the Bank of England astonishingly had stick to its strict domestic policy that they did not issue any banknote whose face value was less than five pounds. The policy caused ordinary people to suffer from shortage of currencies. Meanwhile Presidential Bank in India had mainly issued smaller denominations notes. In addition, notes were accepted legal tender only within the district. They must have been discounted in conversion outside the region (Keynes, pp.28-9). Large amount of local supply of paper money with relatively small denomination made a condition that peasants could accept with less difficulty. This combination of small denomination and locality were the key when paper monies were going to reach the peasant households. In the case of early 20th century China, provincial paper monies played an important role in supplying currencies to collect peasant products to the ports (Kuroda, 2005).

The importance of locality resulted from strong seasonality in monetary demand with peasant economy. Table 6 clearly shows that, while in summer, slack season, the notes held by the Presidency banks and Treasury in India increased, in winter, busy season, decreased. This big gap between busy season and slack season in Indian finance attracted Keynes' attention so much. He remarked that great and regular seasonality afford the 'differentiation between the Indian Market and those which we are familiar with Europe' (Keynes, pp242-3). In order to secure large quantities of peasant products significant amounts of ready cashes must have been

transported to rural markets every harvest season. The discount rate also showed clear seasonality: high interest rates in winter, low interest rates in summer, as Table 7. The seasonal contrast clearly relieved the move of cashes from city to villages. The same condition also appeared in China (Kuroda, 2008b). Thus, sufficient currencies were required to be held locally. In this point we can confirm a dilemma not easily solved.

The statistics of late 20th century USA which we touched in the first section supports the observation that far earlier redemption of the small denomination currency than large denomination one proves higher frequency of using the former than that of doing the latter, and that small denomination currency responded to seasonal increase of monetary demand with higher degree than large denomination one. Thus, it might be easy to imagine that seasonal tensions of monetary demand and supply after harvest should accompany with the problem of keeping denominations proportionately.

Potentially flexible monetary supplies to peasants could have negative relationship with the principle keeping convertibility between the standard money and paper monies or subsidiary coins. Convertibility among monies should mean no transaction cost in changing a money into another. However, it does not mean flexible supply could be guaranteed to both of monies. Extending compatible monies to small peasants in Asia heralded a new stage of world economy. However, it also meant that monetary tension which had locally solved became beyond control by local orders.

Along this interpretation it is not coincidence that most of global financial crises from late 19th century to early 20th century were ignited in autumn, the harvest season. The financial crisis in 1907 which was largest global panic before WWI was an example. In August 1906, speculative plunge in New York Stock Exchange brought serious tension with bank reserves. In order to rescue the banks US Treasury used official money to make a contract of purchasing gold of \$ 36 million from Europe in September. This move caused a serious tension in London financial market, where, in October, the interest rate rose the highest after 1899. Then it was the move of gold to Egypt which had a good harvest of cotton that spurred the shortfall of liquidity (Noyes, p.357). Financial instability appeared to be calm once, but credit panic went around Hamburg, Alexandria, Tokyo and Santiago. Finally the autumn of 1907 the cash demand for collecting foreign harvest hampered London from settling a large amount of financial drafts, and consequently entire credit system fallen down. The panic significantly damaged actual production. For example, steel production of major 6 countries decreased by 23 percent (League of Nations, p.275). Most trade statistics recorded large fall in 1907-1908.

From fall 1907 to winter 1908 a large quantity of gold was recorded to return to

the Presidency Banks in India. It showed that, while monetary situation of India was deeply influenced by that of London, significant amount of gold which could be potentially assembled had been held by individuals. As long as multiple monies could work, financial panic in global level did not always affect local economy, since fluctuating rates between monies could absorb the impact. Meanwhile, even if unprecedented harvest would come in broad areas, urgent demand for currencies would be met by local devices. Thus, compatible system brought a transparency to transactions, but stripped away buffers which softened unpredictable impacts.

5. Towards 1929

After the end of WWI the export of Asian peasant products resumed to increase. However, the way of finance it made different way from before WWI.

Before WWI, very high reserve rate in issuing banknotes was common. In India the note reserve was required to perfectly cover the amount of banknote issuance. In 1913, total amount of note issuance was £46 million, while £11 million of silver rupee, £19.5million of gold in India, £6 million of gold in London and £9.5 of security were reserved (Keynes, p.34). Perfect reserve was in regulation with Iran, too, but actually it was no more than two thirds (Jones, p.80). In the case of Hubei Provincial Bank, which successfully issued the largest amount of provincial paper money in early 20th century China, the proportion of silver reserve against total issuance was 44 percent in December 1908, and 26 percent in July 1910, but total reserve including securities always covered the total issuance of paper money (Xie, p.256). Thus, until WWI the reserve rate against issuance in Asian countries was not always low, even if they were lower than those of industrialised countries.

However, such a high reserve proportion disappeared after WWI. In the case of the Indochina Bank notes, until WWI the proportion was not less than 70 percent. However, in 1918, the issuance increased to nearly triple as the reserve. On 31st Dec 1918, according to the order by the President, the maximum of note issuance was allowed to be 8 times of reserve (Nawata, p.124). After that, the amount of issuance continued to soar before the 1930's.

Besides issuance of banknotes, the bank expanded its credit supply enormously. The bank's lending to mutual credit associations in Cochin-china expanded from less than 100 thousand piaster in 1913 to 15,100 thousand piaster in 1930. The mutual credit association actually worked to finance landowners of growing rice (Robequain,

pp.17-2). Similarly, agricultural credit associations in Burma also had their pear in the 1920's (Cheng, p.274).

Over-lending to mono-culture economy, such as Brazil which suffered from over-stock of coffee, had been thought to be a cause of world depression beginning in 1929 (Kindleberger, chap 4). However, through the 1920's, peasant economy locally accumulated borrowing. As long as the prices of their products kept, over-lending could be concealed. Once the prices began to fall, non-performance would potentially aggregate across regions. Towards the end of the 1920's the prices of major peasant products plunged. Conditions of the world wide credit crisis had been already prepared.

Table 1 Currency Outstanding, Redeemed, in USA, June 1975

Denomination	Redeemed	Outstanding	Estimated to be in active use
\$ 1	1.7	2.6	0.0
2	0.0	0.1	0.1
5	1.9	3.6	0.7
10	3.7	10.2	4.5
20	5.9	26.8	17.8
50	0.8	7.7	6.4
100	1.0	21.3	19.8
500 and over	0.0	0.4	0.4
Totsl	billions 15.0	72.7	23.0

(Anderson)

Table 2 Breakdown of Holdings of United States Currency, 1992

Household	76
Business	8
Underground Economy	36
Destroyed/Forgotten	10
Residual (Unexplained)	147
Totsl	277 billion US\$

(Haughton)

Table 3. Prices of agricultural products

	London			Calcutta	Lagos
	palm oil £/ton	linseed s/qr	Wheat s/qr	Linseed s/cwt	palm oil £/ton
1889	25	42	29.8		
1890	27	43	31.9		
1891	26	42	37		
1892	24	39	30.3		
1893	28	42	26.3		
1894	24.5	38	22.8		
1895	23	37	23.1		
1896	22	33	26.2		
1897	22	33	30.2		
1898	23	36	34		
1899	25	40	25.7		
1900	27.5	54	26.9		
1901	26	53	26.8	12	
1902	27.5	50	28.1	12.2	
1903	28	39	26.8	11.9	
1904	27.5	33	28.3	8.8	
1905	27	39	29.7	7.1	
1906	30.5	43	28.3	8.9	
1907	33	44	30.6	10	
1908	27.5	45	32	10	
1909	29	49	36.9	10.7	
1910	35	66	31.7	11.3	
1911	34.5	70	31.7	15.5	24
1912	33	60	34.8	16.4	21.8
1913	35.5	45.5	31.8	14.6	24
1914	38	49	35	10.1	22.6
1915	35	57	53.9	10.3	18.3
1916	44.5	80	58.4	9.3	17.3
1917	46	112	75.7	10.4	21.9
1918	45	131	72.7	9.4	21.3
1919	69	139	72.8	11.1	43.9
1920	70	157	80.6	31.1	42.3

1921	37	72	72.8	27	17.7
1922	35	75.5	47.8		21.7
1923	36	78	42.2		23.6

Sources: Sauerbbeck (1904,1911,1924); *Statistical Abstract Relating to British India*, p.218; Helleiner, TABLE 2-B-2.

Table 4. Paper monies in Thailand and Indochina

	Thailand	Indochina		
	governmental paper money	banknote issuance	note reserve	
	million baht	million franc	million franc	
1903		3.5	40.2	31
1908		14.8	57	65.7
1913		26.1	86.5	71.2
1918		59.7	174.4	60.6
1923		91.7	831.1	324.6
1928		135.3	1841.1	708
1933		114.3	956.4	822.5

Sources: Central Service of Statistics, Siam, pp.322-323; Gonjo, pp.372-375

Table 5. Issuance of a paper money in Philippine

Year	Total Circulation	Silver Certificates
1904	9057127	6000000
1905	28160667	10450000
1906	30030411	14410000
1907	42814315	21540708
1908	40337982	18883697
1909	41528608	22797454
1910	48754697	26502591
1911	48155587	27339910
1912	52055893	28826331
1913	50697253	27428714

1914	52575118	30025914
1915	51284907	29286856
1916	67059189	41775333
1917	102580314	69511699
1918	131151883	95112523

Source: Luthringer, p.36

Table 6. Seasonality of paper money circulation in India

Months	1906-07		1907-08	
	Active	Holdings	Active	holdings
June	3115	1441	3504	1301
July	3243	1287	3443	1589
August	3211	1359	3430	1747
January	3554	911	3320	862
February	3607	942	3328	938
March	3645	1050	3261	1428

in lakhs of rupees

Source: Keynes, p.54

Table 7. Monthly Discount rate of at the Presidency Bank of Bengal

	1906	1907	1908	1909	1910
Jan	8	9	9	8	6
Feb	9	9	9	8	6
Mar	7	9	7	7	7
Apr	5	7	7	6	7
May	7	5	6	5	6
Jun	6	5	5	3	4
Jul	3	3	3	3	3
Aug	5	3	3	3	3
Sep	7	5	4	4	4
Oct	6	5	4	4	5
Nov	8	6	6	5	6
Dec	9	6	6	6	7

Source: Keynes

References

- Anderson, P. S. (1977) "Currency in Use and in Hoards." Federal Reserve Bank of Boston *New England Economic Review*, (March/April): 21-30.
- Central Service of Statistics, (1940), Siam, *Statistical Yearbook Siam, 1939*.
- Cheng Siok-Hwa, (1968) *The Rice Industry of Burma 1852-1940*, Kuala Lumpur.
- Gonjo, Y., (1993) *Banque coloniale ou banque d'affaires: la Banque de l'Indochine sous la III^e République*. Paris, Imprimerie nationale.
- Helleiner, G.K., (1966), *Peasant, Agriculture, Government, and Economic Growth in Nigeria*, Homewood, Illinois.
- Hogendorn, Jan and Marion Johnson, (1986) *The Shell money of the Slave Trade*, Cambridge: Cambridge University Press.
- Issawi, C., *The Economic History of Iran, 1800-1914*, Chicago, 1971.
- Jones, G., (1986), *Banking and Empire 1889-1952: The Imperial Bank of Persia*, Cambridge UP.
- Kaminishi, M., (2010) 'The Effect of Seasonal Variation on the Demand for Money: an analysis based on the experience in Manchuria between 1916 and 1928', *Journal of Asia-Pacific Studies and Research Paper Series* 20.
- Kemmerer, E.W., (1910) *Seasonal Variations in the Relative Demand for Money and Capital in the United States*, New York, Arno Press.
- Kemmerer, E. W., (1916), *Modern Currency Reform: A History and Discussion of Recent Currency Reforms in India, Port Rico, Philippine Islands, Straits Settlements and Mexico*. New York: Macmillan Co.
- Keynes, J. M., (1924), *Indian Currency and Finance*. London: MacMillan and Co., [1st ed: 1913].
- Kimball, R. C., (1981), 'Trends in the Use of Currency', *New England Economic Review*, Federal Reserve Bank of Boston, 43-53.
- Kindleberger, C.P. (1986) *The World in Depression, 1929-1939*, revised and enlarged edition, U. of California P
- Klein, B., (1974), 'The Competitive Supply of Money', *Journal of Money, Credit and Banking*, 6-4.
- Kuroda, A., (2008a), 'What is the complementarity among monies? : An introductory

- note', *Financial History Review* 15-1.
- (2008b) 'Currency Circuits Concurrent but Non-Integrable: Complementary Relationship among Monies in Modern China and Other Regions', *ibid* 15-1.
 - (2007) 'The Maria Theresa dollar in early 20 century Red Sea region: a complementary interface between markets', *Financial History Review* 14-1.
 - (2005) 'The Collapse of the Chinese Imperial Monetary System' in K. Sugihara ed. *Japan, China and the Growth of the Asian International Economy, 1850-1949*, Oxford U.P.
- Kuznets, S.S, (1933), *Seasonal Variations in Industry and Trade*, New York, National Bureau of Economic Research.
- League of Nations, (1931), *The Course and Phases of the World Economic Depression*, Geneva.
- Luthringer, G. F., (1934), *The Gold-Exchange Standard in the Philippines*. Princeton: Princeton University Press.
- Mcphee, A., (1971), *The Economic Revolution in British West Africa*, London, [1st ed: 1926].
- Nawata, M., (1932), *Futsuryo Indoshina kaheishi* (Monetary history of French Indochina), Yokohama Specie Bank.
- Noyes, A.D., (1909), *Forty Years of American Finance*, New York.
- Pallaver, Karin, (2009) "A recognized currency in beads". Glass Beads as Money in 19th-Century East Africa: the Central Caravan Road', in C. Eagleton, H. Fuller and J. Perkins (eds.), *Money in Africa*, London: The British Museum.
- Robequain, C. (1944) *The Economic Development of French Indo-China*, translated by I.A.Ward, Oxford U.P.
- Sauerbbeck A., (1904), 'Prices of Commodities in 1903', *Journal of the Royal Statistical Society*, 67.
- (1911), 'Prices of Commodities in 1910', *ibid*. 74.
 - (1924), 'Wholesale Prices of Commodities in 1923', *ibid*. 87.
- Sprenkle, C. M. (1993) 'The Case of the Missing Currency', *Journal of Economic Perspectives*, (Fall): 175-184.
- Statistical Abstract Relating to British India from 1910-11 to 1919-20*, (1922), London.
- Xie, Kangsheng, (1988), 'Qingmo gesheng guanyinqianhao yanjiu (1894-1911)', *Zhongguo shehui kexueyuan jinji yanjiusuo jikan* 11.