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Preface

This paper aims to lighten the foreign exchange market in the United States in the years from 1879, when the specie payment was resumed, through 1914, when the Federal Reserve Bank Act took effect, showing how it developed by using the conception of integration which is formed both by internal and external integrations. Internal integration will be approached in terms of the national economy. That is, the method of internal integration pays attention to what degree the

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American exchange market was united, in other words, what degree it reached to a genuinely national market, under the historical condition that the central banking system lacked. While from the viewpoint of external integration we will investigate how the American exchange market was incorporated into the world's economy which was constituted with the United Kingdom as leader, in other words, how it was organized as part of international money market relationship which was made up with London as core.

Then, how should we concretely seize the subjects and approach them from both viewpoints? Answering it will serve to clarify the contents of the conception of integration. So let's try it. We must turn our eyes upon the American foreign exchange market in the antebellum period.(1)

It had twofold structural characteristics, namely, its local separation and its seasonality. The former is elaborated as follows : there existed each exchange market in the major seaports without their interrelationship. In this connection, it is important to keep in mind that they were not always self-completed markets, because they were not all for buying and selling foreign exchange. In the eastern ports, where not only exporting but also importing prospered, exchange markets both for buying and selling were developed, but in the southern cities there were only markets for buying. In the southern ports almost all were for exporting, not importing, which meant that traders there hardly bought sterling bills, but simply sold them.

On the other side, the latter implies that there was a seasonal variation in the market. In the 1850s it was this : the market for selling was most alive in July and August, while the one for buying enjoyed its golden days through January into April.

In a word, we can say about the dual structural features of the exchange market in the United States in the first half of the 19th

century as follows : the demand for exchange (market for selling) and the supply of exchange (market for buying) did not match both spatially and seasonally. And, those situations in the market were reflected in exchange rates, as we will explain shortly.

Each exchange market for buying opened locally in the East, and in the South as well. But, under the locally separate market structure about which we stated earlier, buying rates didn't seem to balance as a natural consequence not only between eastern markets and southern markets but also between markets inside the same district. It was also the same in the case of selling rates in the East. That is, the very nature of things, from the viewpoint of economics, that the same commodity should have the common price, was not realized ; each exchange market had its own buying and selling rates which were fixed independently of the other markets. And, in the case of the exchange markets in which selling and buying trade leaned seasonally to one or the other, it could not be inevitable that exchange rates changed seasonally and drastically : in mid-summer during the height of the selling season rates (quoted in dollars) raised, and on the other hand in the months through January into late spring which the markets for buying were busy, rates were also lowered.

Therefore, the foreign exchange market in the United States in the years we are facing firstly has to be approached from an angle of what degree it freed itself from the historical structure of local separation. That will progress as each market begins to interchange and heightens their mutual relationship. That process will cause to push out a specified market as a nationally special market which is responsible for generalizing all the other markets ; the exchange rate will become fixed in the level which reflects the national condition of the demand and the supply for exchange, not the local : foreign exchange will be dealt with in the common rate regardless of the

market place (domestic exchange rate is abstracted). Thereby the breakaway from the structurally local separation in the American foreign exchange market means as follows : a market which has come into being in a specified port city gains the quality of the nationally integrated market, which is what we understand to be internal integration of the foreign exchange market in the United States.

Also, the American exchange market in question secondly has to be shed from a viewpoint of what degree it changed its own seasonality, in other words, the seasonal variation of exchange rate. Then, how could it be carried out? We must now cast a glance at the foreign trade structure in the United States at that time, because the seasonality in the exchange market under notice had been made up by itself, which was also historically distinctive, that agricultural products constituted a major export item and merchandise imports used to increase in the spring. In the period after 1860 the import movement of commodities certainly came to balance better through the year than before, despite the irregularity being not fully cleared out. But, the seasonality in the export movement was as marked as ever. Speaking of the changes in it, those were only as follows : in the decade of the 1880s outflow of commodities began to rise in September and reached a peak in December, while in the years of 1897-1913 it showed some increase between July and August, and a more extreme expansion in October-December in comaprison with those movements in the 1880s.[2] So we can say that there wasn't any fundamental change in the trade structure in the United States in the time under review, as compared with the previous years. If so, could the market be stabilized in any degree yet in that period? The answer is no. Even under almost the same foreign trade structure as in the mid 19th century, there is a possibility that exchange rates gradually decrease their seasonal variation ; that can be achieved if

the external integration of the American exchange market, which is reflected in the stabilization of the exchange rate, just advances in closer cooperation with the London money market.

Thus, in studying next the development of the foreign exchange market in the United States in the years of 1879-1914, we inquire into the two integration processes as mentioned above.

Now then, the change of the separate structure of the exchange market, which corresponds to the internal integration of the two processes of integration, has already been thrown light on by Edwin J. Perkins. He has monumentally dealt with the House of Brown and pointed out that the House spread a network of branches and agencies in almost all major ports throughout the country by the early 1840s ; and in the interim of ten years after that they began to apply the New York rate, which was fixd in the New York house, to the dealings in the other Browns' houses : that is, the development of the telegram system made it possible that the New York house quickly gathered information from the other local markets to command a view of the nation-wide market and fix the rate, which would be in turn used uniformly as the Browns' rate among them.[3] Concretely speaking, a specified market which comes to generalize all the other markets in the course of each local market is beginning to have connections, as we said above, was the New York market.[4] It is quite natural that the New York exchange market took initiative in internally integrating the other markets, because that city was the center of finance as well as export and import in the United States.

Needless to say, Perkins' research as mentioned above was about the internal integration of the American exchange market, so to speak, from an angle of business history. We should try it here in terms of financial history, but so far we have no related materials. So in connection with the arguments of the internal integration in this paper

we must refrain from going further than examining Lawrence H. Officer's view, which discussed the development of the exchange market in the 19th century in the United States by using the conception of integration[5] as well as in this paper, and demonstrating that his study of integration actually resulted in dealing with the internal integration, although he intended to try it from two points of view not only internally but externally. It will be a task for section I. Another purpose of this paper has been said to argue the external integration of the American exchange market. To accomplich that end we will focus on its seasonality, that is, the seasonal variation of the sterling rate in the United States during the era from the latter part of the previous century to approximately the first 10-odd years of this century, searching some historical causes which brought about its decreasing. But in considering that subject we must ascertain the actual rate behaviors at that time. We will then do it in section II. Therefore the course of external integration will be followed up in sections III and IV.[6]

(1) The following description is mainly indebted to Edwin J. Perkins, *Financing Anglo-American Trade, The House of Brown, 1800-1880,* Cambridge, Mass., 1975, Pt. Two, Section 3.

(2) Arthur H. Cole, "Seasonal Variation in Sterling Exchange," *Journal of Economic History,* 2, 1929-30, p. 211.

(3) Perkins, *Anglo-American Trade,* pp. 156-157.

(4) It was written in 1904 by Anthony W. Margraff that "it is safe to say, that there is, perhaps, no feature pertaining to banking throughout the Country so dependent upon New York financiers, as Foreign Exchange." in, *International Exchange, its Terms, Parts, Operations and Scope,* Chicago, 1904, p. 104.

(5) Lawrence H. Officer, "Integration in the American Foreign-Exchange Market, 1792-1900," *Journal of Economic History,* 45-3, September 1985. Our approach of using the conception of integration received suggestions from his paper. But, his contents of integration are quite different from ours, as will become

clearer later.

(6) Due to our end as explained above, we didn't refer to the market mechanism and the operations of the foreign departments at the period that confronts us. Those subjects were dealt with by Franklin Esher's books : *Elements of Foreign Exchange*, 3rd ed., New York, 1913, Chaps. 5, 6 : *Foreign Exchange Explained*, New York, 1917, Chaps. 9, 17.

I. Internal Integration in the Foreign Exchange Market in the U.S. — Examination of Officer's "Integration in the American Foreign Exchange Market" —

The argument in " integration" by Officer began with reviewing the history of the study about the foreign exchange market in the U.S. in the 19th century. We will firstly try to listen to it.

Officer said that four approaches were found in them. The first was one taken by Arthur H. Cole and Margaret. G. Myers, both of whom "let the spread between specie points represent the extent of market integration"[1] and a narrowing of the former signified an increment of the latter. Observing a gradual narrowing of the width of specie points, they interpreted the evolution of the American exchange market through the 19th century. A second approach could be extracted from the "violation of gold points," which clarified that the dollar-sterling rates "often and persistently" varied "beyond the gold points"[2] in the years of 1880-1914. Because those findings, which were pioneered by Oskar Morgenstern and recently inherited by Truman A. Clark, implied that the extent of market integration could be deduced by what degree and frequency the rate violated gold points. It will lead us to a conclusion that integration in the "market was weak as late as at the turn of the twentieth century."

A third approach, though taken only in considering the exchange market in the early 19th century, focused on the fact that the exchange rates scattered in the various cities of quotation. In this approach,

reduced dispersion of the rate was assumed to reflect advanced integration. That is, it gave attention to, by what degree rates scattered in space. As opposed to the third approach, it is the fourth approach that watched the variability of the exchange rate over time. Except Cole as quoted above and Lance E. Davis and Jonathan R.T. Hughes, Officer has also used this technique before. They commonly found that exchange rate variation showed a gradual trend to be reduced throughout the 19th century.[3]

As we have seen, Officer pigeonholed the existing literature concerning the subject under notice in terms of what approach they took. But, its validity must actually be questioned, which we will clarify hereafter.

The first error is found in such methodological differentiation as the separation of an approach which the variability of the exchange rate was made an issue from one which the spread of gold points was argued. He reviewed as if they were mutually independent in terms of approach, namely, the former was an isolated approach from the latter. However, it was against the fact. Speaking of the method, Cole, and Myers as well — she used a fourth approach which Officer called, though her name was left out from his list for some unknown reason —, considered the decrease of the spread of gold points as the cause of a decline in the variation of the exchange rate, linking them together with accuracy.[4] Then, why did he commit an error in these points ? The reason is supposed that he was very strongly pushed by his own consciousness to the technique in pursuing "integration of the American foreign exchange market" in the 19th century. Because, judging from his actual analysis, we can undoubtedly describe it as follows : two disputed points, one is how the width of specie points were and the other is how the exchange rate varied, must not have been dealt with from an angle of how they were casually related, but

rather they were methodologically separated. As it will become simple later, it was his own methodology that "external integration" inquired how the spread of the gold points altered and "internal integration" how the variation of the exchange rate was.

The next doubtful point relates how Morgenstern's and Clark's studies were arranged as one of the approaches regarding "integration." We think it is not proper, because they did not intend to prove what degree the American exchange market developed and was "integrated" in the era which we are now dealing with. That is, Morgenstern wanted to research whether or not the gold points system was as strictly and effectively functional as it has generally been believed to be in the international finance mechanism at the time of the classical gold standard system. Clark also sought to make clear how the gold standard system was inefficient only in order to object to the voices of its revival. That means that Morgenstern, and Clark as well, did not try to judge the extent of the development or integration of the exchange market by observing the degree and frequency of the "violations of the gold points." Their arguments may certainly imply what Officer described. But, in so far as the analysis like that did not actually exist, it is not pertinent that it was dealt with as an approach in the history of the study.

Furthermore, we can't help feeling an arbitrariness in his way of dealing with the third method. In this point I must briefly refer to the contents a little, because his explanation, in which this third method (and only this method) was driven out of his own viewpoint, entirely lacked reasonability. He said as follows : while this method "is revealing[the fact that the dispersion of the rates of Philadelphia, Baltimore, and New York reduced] for early decades of the [19th] century, it begs the more basic question of national exchange behavior."[5] He did not mention more than that, but we will probably

be able to understand that "national exchange behavior" means exchange movements in the case where those of not only the East but also the South were coming into sight. Anyway , he spoke as if no real study in those exchange movements was to blame for this third method itself, and because of that, he did not take it into his approach. However, of course, there is no reason why the method in question should be dealt with so. On the contrary, as mentioned earlier, it just contains an inevitable angle which considers the development of the American foreign exchange market : that is, a national completion of the category of the foreign exchange market (internal integration of the foreign exchange market). We will discuss it again later. Now, then, why did Officer lack the logic as above in dealing with the third approach as he named? We will be able to reveal the reason as follows : his arguments of "integration" are constituted from the models that compute the averages of the absolute value of exchange rates (and specie points), and such a method as his is originally alienated from the third method, which focuses on the spatial divergence of the exchange rates. He would not be able to do anything without shifting the responsibility onto the method itself and averting his eyes from the facts to which the method paid attention.

Officer's review in the history of the study must be estimated as imperfect in consequence to what was mentioned above. On the other hand, however, it is useful to reveal where the points lay in analysing the problems we are facing. Actually, he mistook four points in the history of the study for the methodological differentiation among each scholar. Then, what are the four points? They are (1) the spread between specie points, (2) the effectiveness of specie points mechanism, (3) the uniformity of the exchange rates among each market, and (4) the (seasonal) variation of the exchange rates. We also think all of them are inevitable points in the case of lightening on the American

foreign exchange at the period under notice. In other words, the arguments of integration of the American foreign exchange market must cover all of those four major points.

Then, how about Officer in that point? We have already disclosed that his "integration" actually cut off the point (3) by force or without any reason. That is, it consisted of an "integration model" which covered only three ((1), (2), and (4)) of the four points we thought were absolutely necessary. We can say, in his words, as follows : it was argued on the "integration model" which was made up from the first, second, and fourth approaches —— only under some criticism to each which will partly be referred to later ——. We must examine it next. In this case it may be convenient to anticipate the conclusion. Ironically, we will be able to make clear that Officer's "integration" included just the contents to go back to the consideration by the third approach which Officer himself denied to adopt, in other words, it will end our internal integration.

Well, Officer pursued "integration" of the American foreign exchange market in the 19th century by the method of making the distinction between "external integration" and "internal integration." The former was said to be measured by the extent of the narrowing of the spread between the gold import and export points. That is, "assuming a gold standard and expressing the gold import and export points each as a percent of parity, the average of the gold points, denoted as G, measures the extent of external integration, specifically, the amount of integration yet to be achieved."[6] That meant that he regarded $\triangle G$ as its metric model. On the other hand, the latter "internal integration" was explained like this :

> It "consists of keeping the exchange rate within the spread [between the gold import and export points], so that the gold points are not violated. If the integration is 'perfrct,' the law of large numbers is applicable. Over a sufficient

time period the exchange rate will take on all values within the spread with equal probability, and exchange rate variation. R (measured by the mean of the absolute value of the exchange rate and expressed as the percent deviation from parity), would be G/2. Then R-G/2 represents the extent of internal integration and, like G, measures the amount of integration yet to be achieved."[7]

Table I Statistics of Exchange Market Integration

Period	Exchange-Rate Variation (R)	External Integration (G)	Internal Integration (R-G/2)
1791−1800	4.39	6.73	1.025
1821−1830	2.17	2.98	0.68
1881−1900	0.32	0.64	0

Source : Officer, "Integration," p. 576, Tab. 9.

We found after all that in this case Officer considered △(R-G/2) the metric model. And, he himself computed the specie points and the exchange rate series which were necessary to measure the extent of "integration" by using those two models. In these points we must add that he criticized those scholars as cited above by the reason that they had not properly examined them.[8]

In a word, Officer intended to measure the extent of the development of the American foreign exchange market in the 19th century by computing the extent of narrowing of the specie point spread (△G) and the degree of reducing of the exchange rate deviation from parity (△(R-G/2)), in which the case of the former represented the extent of "external integration" and the latter the extent of "internal integration." Table I shows the results of those calculations.[9]

According to this, in the years of 1881-1900 "internal integration" is understood to have been accomplished perfectly (R-G/2=0). However, we have already known from the Morgenstern's and Clark's studies that the "violations of the gold points" were repeated as one of the historically characteristic movements in the exchange rate

behavior at the same period. Officer's review of the history of the study also informed us about it. Plainly both are contradictory. Then, what attitude did Officer, who drew the conclusion that "internal integration" was thoroughly realized, assume toward the "violations" ? Nothing.[10] It was his answer. He would probably be thinking as follows : his argument was strictly based on the averages which were computed by the metric models, and hence the "violations," if they separately happened, were not worth considering. It will be the characteristics in common with the historical analysis by the metric model. And, if so, we must point out that his attitude has its own limit there, because it will mean the burying of the proper significance of the existence of "violations" in the history of the study. In terms of the historical study, wasn't it necessary to have more penetrating eyes to the following problem : despite achieving "internal integration," on the other hand, why did the "violations" happen ?

By the way, Officer differentiated his conceptions of "external integration" and "internal integration" from an angle of whether the development of the foreign exchange market was caused by the impact of the factors external to the American economy or the internal forces. Which means that he conceived as follows : the narrowing of the specie points spread was brought about by the former, and on the other hand the reducing of the exchange rate deviation from parity was attributable to the latter. Then, what concretely were those external and internal factors? Let's contemplate on them next. Finally, the substance of Officer's opinion of "integration" of the American foreign exchange market in the 19th century will be revealed.

As the impulsive factors of "external integration", Officer enumerated the following four points : (1) the improvement of ocean transportation services reduced the freight rate on shipping specie, including the insurance rate, (2) "better communication improved

exchange dealers' projections of the arrival rate for bills, that is, the rate at which bills would be rediscounted in London," (3) the gold policies of the Bank of England and the U.S. Treasury cut down the specie transactions costs, and finally (4) "normal profit (including risk premium) fell from 0.25%" in the early 19th century "to 0.125% by the 1890s." And, he added that factor (4) was due in part to improvements in "internal integration" and that factor (3) also stimulated "internal integration."[11] On the other hand, he claimed that "the principal force that fostered internal integration in the nineteenth century was the growth and operations of giant American foreign-exchange dealers," representativily the House of Brown.

That is, Officer mentioned as follows :

> "First, with branches in all the major American foreign-exchange centers (the port cities) and allied with a powerful firm in England, they possessed substantial economies of scale. Second, their financial strength permitted them to take risks in the form of uncovered foreign-exchange positions that reduced seasonal and random fluctuations in the exchange rate and eventually maintained a continuous market for foreign exchange. Third, their sheer size and large share of the market motivated them to innovate. Especially noteworthy in this respect was the Brown's exploitation of the telegraph domestically in the 1840s and 1850s to maintain a uniform exchange rate in all the major port cities and to change that rate with ever greater frequency over time."[12]

And, he said that "internal integration" which advanced as such was further stimulated as a consequence of free-entry competition after the resumption of specie payment in 1879.[13]

Officer's view was as above. We must start to examine it critically. In the first place, we will take up "external integration" which claimed the narrowing of the specie points spread, the case of which we will light on from an angle of the argument of the specie points to start with.

The factors which influence the specie points, in other words, the

specie shipment cost can largely be divided into two : that is, "the costs of transporting gold (which include interest costs covering the period of transport),"[14] and "the costs of transforming gold from its shape and fineness when collected in the one country to the shape and fineness acceptable in the other country."[15] That implies that if each of those costs is cut down, the gold points spread will become narrower. Just as we had thought, Officer also explained the reduction of "the costs of transporting gold," which is the former of the two costs as cited above, by raising his factors (1) and (2). We can agree with him. Then, how about his factor (3)? It corresponds to the decline of "the costs of transforming gold" which is the second cost according to our opinion. If so, isn't there any problem? The answer is no. Why not? We must consequently deal with it.

Officer regarded his factor (3) as the policies which "facilitated specie transactions" through the fall of the dealings costs.[16] That means that he thought of them as the policies which smoothed the gold export and import transactions. However, we must say that the gold policies which the Bank of England and the U.S. Treasury adopted in the classical gold standard period had the nature that they fostered gold import and on the other hand depressed its export. According to Richard S. Sayers, it was not until after the Bank rate policy succeeded in the panic of 1907 that the Bank abandoned such gold devices.[17] And, it was as Marcello de Cecco also stated. That is, the U.S. Treasury had "no two-way mechanism" between the gold market : it "simply purchased in vast quantities."[18] Such gold policies as stimulated its import but regulated its export would not generally be able to be called those which promoted the specie transactions. The former policy can certainly be called the cut-down policy of gold transactions cost. But, on the contrary, the latter was none other than the policy which aimed to push up the prime cost of gold export through raising the gold

dealings cost. The ignorance of which will be discussed fully later makes it impossible to follow the contexts of the "violations." We point this out beforehand, though it will be understood from what we will mention later.

Officer's way of dealing with factor (4) includes problems, too. He said that the fact of the fall of normal profit was due in part to improvements in "internal integration." But, wasn't it in all parts? Because we cannot believe that gold arbitrageurs and exchange dealers volunteered to cut down their profit (rate). And, in terms of the argument of the gold points, this should have been managed within our first category of the specie shipment cost, that is, "the costs of transporting gold," which come under his factor (1).

Those as above are questions from a view of the gold points. However, they may not be serious, compared with the error as follows. It is nothing but his method that the consideration of the gold points was positioned as "integration" of the foreign exchange market. Let,s explain next the reason why it was wrong.

In Officer's opinion the narrowing of specie point spread itself was grasped as "integration" ("external integration") of the foreign exchange market. We can understand from his way as such that he judged the reduction of specie point spread itself to be the phenomenon which expressed the development of the foreign exchange market. But, it was never so. Because, to what level of the par the gold export and import points move up and down, that is, how much the specie shipment cost is is never decided in the foreign exchange market. That is, so to speak, only a postulate to the market (exchange dealers). In other words, the foreign exchange market doesn't have such an impulsive element as makes the gold points spread reduced in the inside. The influential factors of the specie shipment cost, which are largely divided into two as mentioned above, were both nothing

but the external ones to the American foreign exchange market. Officer made a distinction between the internal and external factors to the American economy, following after Davis and Hughes as will be known later. But, he should have just had angle of distinguishing between the internal and external factors to the American foreign exchange market. The growth of the inside factors in the market will no doubt cause it to develop itself essentially. Remarking in passing, the London money market had a side face which was even an inside factor to the American foreign exchange market, as will be given below.

The consideration of the specie points is not the point in case of arguing integration of the American foreign exchange market. Those were clarified as above. Officer's "external integration," however, was no more than the argument of the specie points. We must conclude that it didn't possess the fact of integration.

Then, how about his "internal integration"? Let's proceed to that subject next. His angle about it was how the prosperity of the House of Brown contributed to the fall of the exchange rate deviation from parity, and in that respect he indicated three points. It is about the following passage referring to the second point of them that we should set up a question : the activities of the Browns "reduced seasonal and random fluctuations in the exchange rate." Certainly, the House was the biggest exchange dealer in the then third quarter of the 19th century. But, was their "financial strength" mighty enough to control the market even slightly? We must refer to the authority on which Officer's description was based. It was Perkins, *Financing Anglo-American Trade : The House of Brown, 1800-1880,* (pp. 156-157, 182), which has been shown above, too. So, let's peruse this. As expected, we can never find such an indication as Officer said. As for the relevant matter, how the Browns managed and operated their exchange fund (in dollars and sterling) in the circumstances of times during which

selling and buying seasons of exchange were maladjusted was only argued. As will be known from Chart I in the next section, the reduction of the variation of exchange, to be certain, was clear in the 1870s, compared with the 1850s. But, we must say that it is groundless if the fact was attributable to existence of the Browns as Officer did. As will be touched upon later, we think that it was due to the narrowing of the gold points spread.

Officer's "internal integration" of the American foreign exchange market aimed to argue the extent of the decreasing of the exchange rate deviation from parity by searching for a clue to the Browns' activities. However, in order to forward it he must have distorted the fact. But, on the other hand, his work lets us know that the Browns in the 1850s maintained "a uniform exchange rate in all the major port cities" and changed "that rate with ever greater frequency over time." That points to the same state of things that Davis and Hughes had said. That is, they wrote, as will be seen soon, that "rates in any city were conditioned by rates in contiguous areas," and that fact is just what we keep our eyes on in internal integration.

Then, lastly, let's look toward the study of Davis and Hughes. Its inspection will be helpful to make clearer our view which was presented above, since it lightened the fact that the dollar-sterling exchange rate stability advanced as the 19th century progressed.

Regarding the separation of the causes of the fact as above, Davis and Hughes made a distinction between influences of "factors external to the American economy" and "fundamental changes within the U.S. economy" : as the former they gave "reduced ocean-transport costs coupled with the increased speed and reliability of transport and communications and the development of adequate ocean insurance," and as the latter the development of domestic credit system (which meant firstly less frequency of bank specie suspensions caused by

advancing the banking system stability and secondly better integration of the U.S. financial market brought about by improving communication and transportation facilities.) And, they gave the latter the ascendancy, saying the former as "important."[19]

To sum up, in the former, reduced gold shipment costs was pointed out. As we can understand from what we have already reviewed, it should have been dealt with as a factor which directly progressed the narrowing of the gold points spread and, as a result, contributed to stabilize the exchange rate. That was no more than what Cole and Myers mentioned. On the contrary, Davis and Hughes did not differentiate between both, dissolving the narrowing phenomenon of the gold points spread into the reducing one of the exchange rate variation. No wonder that they could not look through the casual sequence between them. But, their study was valuable in terms of correlating the stabilized exchange rate behavior with the development of the domestic credit system : as a result of loss of extraordinary variability of the exchange rate, which better stability of the banking system produced, and advanced integration of the U.S. financial market, "internal exchange rates disappeared and rates in any city were conditioned by rates in contiguous areas. This widening of the 'extent' of the exchange market also tended to damp the amplitude of the fluctuations."[20] But, it doesn't mean that we can assent to all. Those passages include some serious errors.

What Davis and Hughes described that "rates in any city were conditioned by rates in contiguous areas" and "this widening of the 'extent' of the exchange market" made progress implies, in our opinion, a reducing or disappearing of the spatial exchange rate difference. It was no less than the circumstance that the customers of exchange dealers could sell sterling exchanges at the same rate, for example, in either New York or New Orleans, and buy as well. In other words,

the American foreign exchange market, in which the demand and the supply were in conformity with each other on the economically nationwide scale, not being divided among the market cities, reached such a historically developed stage as could categorically be defined as the nationally integrated market. However, they are firstly in error in thinking that it was produced from the development of the credit system (banking system and financial market). Because, as will be described later, the nucleus of the credit system (banks) and that of the foreign exchange market (exchange dealers = private bankers) did not always overlap each other until the 20th century started. We can't immediately induce a conclusion in the "widening of the 'extent' of the exchange market" from the fact of the development of the credit system. It should have been pointed out as advanced integration of local markets which were formed at each port city. It should not, of course, be overlooked that the growth of exchange dealers (nationwide expansion of their networks of branches and agencies) just pushed it.

Secondly, they didn't understand the difference from an angle of the exchange rate between the historical stages which "rates in any city were conditioned by rates in contiguous areas," that is, "the 'extent' of the exchange market" widened and those previous to this. Because, in this connection, they differentiated in terms of whether "the amplitude of the fluctuations" of the exchange rate tended to be damped or not, as we can judge from the passage that the "widening of the 'extent' of the exchange market also tended to damp the amplitude of the fluctuations." But, the difference between them was not in there but in whether such a mechanism as rates which were quoted at each local market tended to make themselves uniform worked. Furthermore, we must add the following, though the same thing will be repeated : what "tended to damp the amplitude of the fluctuations" was rather narrowing of the gold points spread, which

was caused by the decrease of the gold shipment costs, in their words, influences of "factors external to the American economy," than the widening of the 'extent' of the exchange market," which was described as "fundamental changes within the U.S. economy" by them. As a result, the exchange rate reduced its width of variation and, further due to the full growth of factors internal to the market, augmented its own stabilization.

We, at last, have reached the stage where external integration of the American foreign exchange market should be dealt with. But, prior to that, we need to examine the real movements of the exchange rate together with the materials.

(1) Officer, "Integration," p. 558.

(2) Oskar Morgenstern, *International Financial Transactions and Business Cysles,* New York, 1959, p. 276.

(3) Officer, "Integration," pp. 558-561. Let's write up literatures by scholars who were cited above, according to Officer's classification. On the first approach, Cole, "Evolution of the Foreign-Exchange Market of the United States," *Journal of Economic and Business History,* vol. I, May 1929, pp. 405-406, 419-420, fn. 3 ; Myers, *The New York Money Market,* vol. I, New York, 1931, rep. 1971, pp. 74-75, 341-344. On the second, Morgenstern, *op. cit ;* Clark, "Violations of the Gold Points, 1890-1908," *Journal of Political Economy,* vol. 92, Oct. 1984, p. 818 ; On the fourth, Cole, "Evolution," p. 406 ; do. "Seasonal Variation," pp. 207, 211-213 ; Davis and Hughes, "A Dollar-Sterling Exchange, 1803-1895," *Economic History Review,* 2nd ser., vol. XIII, no. 1, 1960, pp. 58-59 ; Officer, "Dollar-Sterling Mint Parity, " pp. 603, 606-609.

(4) Cole, "Seasonal Variation," p. 213 ; Myers, *New York Money Market,* p. 342.

(5) Officer, "Integration," p. 561.

(6) *ibid.,* pp. 561-562.

(7) *ibid.,* p. 562.

(8) *ibid.,* pp. 562-565, 568-575.

(9) Based on it, Officer asked himself what the external and internal forces were underlying the tremendous improvement in the exchange market integration over the century, and progressed his argument as under. That

is, while "external integration" improved 6.09% of parity, "internal integration" only accounted for 1.025% of parity : it shows that the former was 6 times as influential as the latter in the advancing of "integration," and hence that Davis and Hughes' opinion, which gave priority to domestic factors, not external forces, in explaining the development of the market (increased stabilization of the exchange rate), should be denied, because the promoting factors of "external integration" were external to the American economy and those of "internal integration" internal to it ("Integration," p. 576), as will be seen later.

Now, advocating such a point as above was just what Officer's paper aimed at. (*ibid.*, p. 557.) It wasn't however, thought to be a controversy of deep significance. Why ? The following is the reason. That is, both factors as cited above certainly had a difference between them that the one was external to the American economy and the other internal to it, but they were not influential to the American exchange market in the same dimension. As will be mentioned later, the one should be dealt with as factors external to the exchange market and the other as those internal to it. In this connection, the significance which changes or maturity of each factor have in relation to the evolution of the market was different between them. Both camps lacked in seizing the essence of the problem as such. More of the Davis and Hughes' view will be examined later.

(10) But, in the paragraph in which the history of the study was reviewed, Officer referred to the "violations," which was advocated by both Morgenstern and Clark, on the particular points as those : (1) the "violations" unfairly ignored the exchange rate movements which stayed within the spread of gold export and import points ; (2) it disregarded the spread of gold export and import points (which was moving toward narrowing as time went by) ; (3) the specie points on which it depended as the materials were doubtful in their exactness, more, and though it used cable quotations as the exchange-rate data, the demand bill was just dominant in the gold-arbitrage transactions in the U.S., not cable drafts. (Officer, "Integration," pp. 558-560.)

We could plainly understand that Officer did not disclose his interpretation about the facts themselves regarding "violations." Anyway, in conformity with our own concern, we must here comment on his saying as seen above. That is, as mentioned earlier, both Morgenstern and Clark aimed to prove that even at the period of the classical gold standard system the exchange rates were not always settled in the upper and lower limits of the gold points, and in so far as their intentions were as such, Officer's critiques at least under

(1) and (2) were not proper.

(11) Officer, "Integration," pp. 576-578.

(12) *ibid.*, p. 578.

(13) *ibid.*, p. 579.

(14) Richard S. Sayers, *The Bank of England, 1891-1944*, vol. I Cambridge, 1976, p. 48.

(15) *ibid.*

(16) Officer, "Integration," p. 577.

(17) Sayers, *Bank of England Operation. 1890-1914*. London. 1936. rep. Westport, Conn., 1970. pp. 100-101.

(18) Marcello de Cecco, *The International Gold Standard, Money and Empire*, New York, 1984, pp. 116.

(19) Davis and Hughes, *loc. cit.*, pp. 58-59.

(20) *ibid.*, p. 59.

II. The Exchange Rate Movements

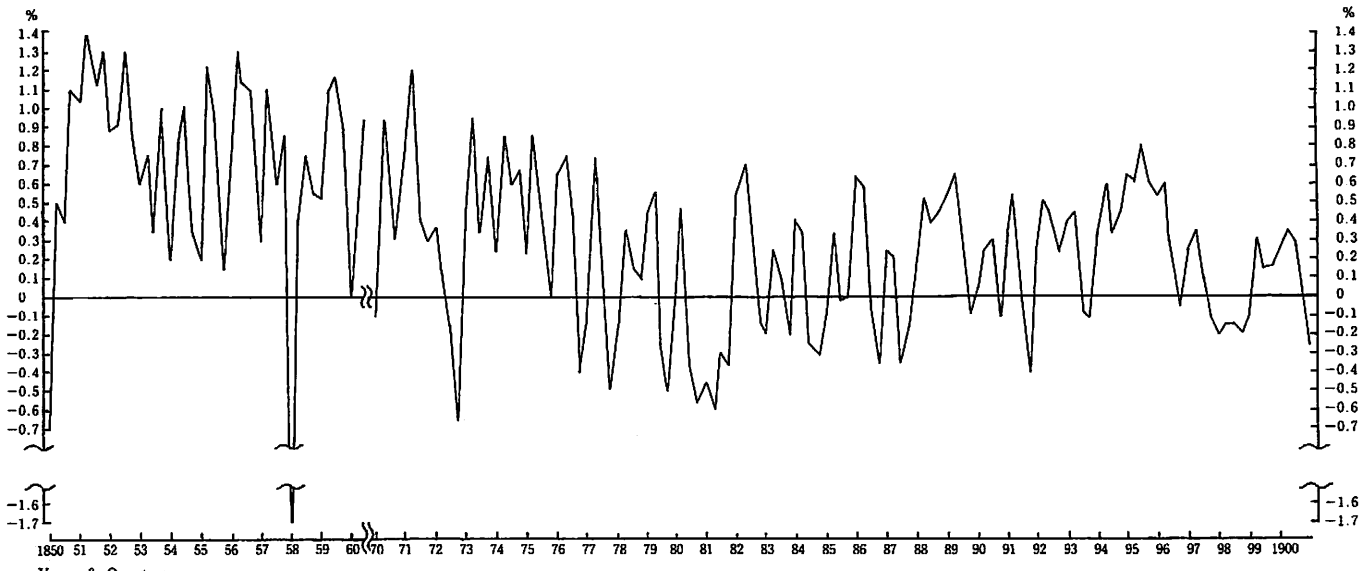
Let's start in this section on dealing with the history of study in the materials referring to the dollar-sterling rate in the 19th century. It was Davis and Hughes as cited above who searched concretely its time series for the first time in 1960.[1] They estimated the percentage deviations from the parity of $4.8665 pound of the dollar-sterling rate by a quarter in the years of 1835-1895 by adjusting, as mentioned below, the time bill prices which Nathan Trotter, a Philadelphia metals importer, purchased during the period of 1803-1895 and remitted to England to cover British obligations. That is, firstly, Davis and Hughes must have converted Trotter's bill prices in parity of $4.8665 equivalent, as, though the parity was after 1834, they were usually quoted as the percentage premium or discount from the old parity of $4.444. Secondly, it was necessary to consider the depreciation of the paper currency in the years of 1862-1879.[2] And, thirdly, they took off the interest component, which would have been involved in Trotter's bill prices, from them, on the base of an assumption that as Trotter would

otherwise have invested in the American money market, their bill prices would have been affected by the short term rate in the U.S.[3] The average maturity of Trotter's bills naturally became shorter as time went by. It drastically became after 1860, until it was about 60 days : in the 70s in the longest case 19.4 days (1873) and in the shortest 4.3 (1879), and after 1882, 0.0 (sight bill).[4]

However, why was Trotter's buying of time sterling bills the same as investing in papers quoted in dollars? In terms of investment, shouldn't it have been regarded as that in sterling assets? Just as we thought, the criticism on the Davis and Hughes' data appeared. It was what Perkins did in 1978. Proving that the interest rates reflected in the Browns' bill prices were closely related with British rates rather than American rates, he presented new rates series by a quarter in the years of 1835-1900 by the following means : from 1835 to 1869 the rates were computed from Trotter's bill prices and the Bank of England rates and after that the rates were reckoned from the daily or weekly rates in *Financial Review,* which recorded for three days bills from 1870 to 1878 and for sight bills from 1879 to 1900.[5]

Perkins concretely criticized Davis and Hughes as below on the grounds that they did not realize a close connection between the motive of American importers who purchased sterling bills and the motive of merchant bankers who dealt with foreign exchanges as well as issued credits : that is, Trotter's object to buy sterling bills was not in gaining interest components but in paying British obligations, and "in buying a sterling bill from a foreign exchange dealer such as the Browns, Trotter should not be seen as extending credit," but as receiving it ; because "importers, like Trotter, had to settle debts that had been incurred under a letter-of-credit agreement, and by not insisting upon immediate reimbursement with a short bill (but only after 60 days had elapsed), the Anglo-American merchant banker

Chart I Dollar-Sterling Exchange Rate Series by Quarter 1850-1900 (percent sterling premium over parity)



Source : Officer, "Integration", pp. 564-565, Tab. 1.

extended a short term loan to his letter-of-credit customer." The whole issue would have been explicated better just from a standpoint of a leading foreign exchange dealer, not a metal importer.[6]

Perkins' view as above that, in the case of deducting interest factors from time sterling bill rates in order to convert them into sight bill rates, the British interest rate, rather than the American, should be used, was succeeded by Officer in 1985. But, the latter insisted that to represent the British interest rate the market rate of discount should have been adopted when available, unlike Perkins who used the Bank rate.[7] Besides, in regard to the rates after 1870, Officer depended on *Financial Review,* as Perkins did, and clarified the reason why he did so for himself like this : the rate series recorded in it were of the New York market which was the national center of the foreign exchange transactions, and even in the years of 1870-1878 were expressed in gold dollars rather than greenbacks.[8] Since *Review*'s rates concerned three days bills till 1878 as mentioned above, and, probably, the way of computing the interest components in the interim was different from each other, the rate series during the period from 1870 to 1878 presested by both authors showed some discrepancy.

As a result of some examination of the data as above, it certainly seems that we are led to be able to grasp more accurately the real movements of the sterling rate in the U.S. in the 19th century. Then, what does Officer's series teach us? It exhibits that the wave of rate variation gradually became milder as the 19th century approached its own end. He presested such statistics as Chart 1 on the base of his own series. It will not be an error to say that the stability of the exchange rate which was accomplished after the 1870s, especially in the 1880s, got firmly fixed in the 1890s. First of all, it was a result of the narrowing of the gold points spread.

But, it doesn't mean that the rates during the period under notice

behaved steadily in the spread. As said earlier, none can deny Morgenstern's and Clark's views which demonstrated that the rates varied breaking through the gold points. To sum it up, we can understand that, in spite of the gradually reduced variation of the rates, "violations" happened. They are plainly contradictory. That is what we pointed out in relation with Officer's "internal integration" in the previous section. If that is the case, how should we solve such an inconsistency? It will as a matter of course be clarified if we pursue the reason why such behavior of the exchange rates as the argument of "violations" indicated were brought into existence.

If the sterling rate in the U.S. rises up or falls down across the limits (the gold export and import points) and the settlement by gold rather than that by the sterling exchange is thought to be more profitable, gold export or import will take place until the demand or the supply for the exchange stops ; hence the rate will tend to stay within those upper and lowest limits, never exceeding them. This is, needless to say, what is called the mechanism of gold points. We should not, however, forget that the assumption is absolutely inevitable, as far as it goes. It is none other than the "assumption of complete rigidity"[9] in the specie shipment cost, as referred to earlier, which is consisted of "the costs of transporting gold (which include interest costs covering the period for transport)" and "the costs of transforming gold from its shape and fineness when collected in one country to the shape and fineness acceptable in the other country." If so, how was it actually? "In the pre-1914 world costs of physical transport could be assumed stable for fairly long periods, and the interest charges did not very much, though could be —and were— manipulated to some effect." But, "there was more serious room for play in the costs of transforming delivered gold into acceptable gold."[10] As stated above, the U.S. Treasury and the Bank of England

interfered in the gold export and import transactions whenever was necessary. In terms of the efficiency of the gold points mechanism, some trouble must have been given rise to. Making clear that the government (the U.S. Treasury, the Bank of England) had incentives to regulate the gold export and to stimulate the gold import and, in the short run at least, successfully executed them, Clark, who ranks with Morgenstern in the "violations", too, concluded that such government interference to the gold transactions had high possibility as a cause which raised "violations of the gold points" in the exchange rate movements(11).

The govermental intervention to the gold export and import transactions is nothing but an act that forcibly put on the brakes to the function of the gold points mechanism to control it. Even so, but, Clark's argument is also open to the criticism for being imperfect. The reason is as follows : "violations" which he pointed out would certainly happen under the inhibitive policy of the gold export ; but, he could not take into account that the similar phenomena would never occur in such phases as the gold import policy was driven forward.(12) That is, the Treasury's inhibitive policy of the gold export was a measure not immediately to cause the gold export, even if the sterling rate rose up beyond the gold point, and under the policy, breaking through the gold point, the exchange rate could have reached to such a level as corresponded to what degree it was strict (what degree "the costs of transforming gold" were raised), in other words, such an artificial prime cost of gold export as answered to the inhibitive policy : on the other hand, the similar policy of the Bank was, from the standpoint of the U.S., a step not at once provoke the U.S. to import gold, even if the rate fell down below the gold point, and, hence, in this case, in contrast with the former, the sterling exchange would be transacted even at the rate under the gold point ; buying the sterling

exchange at the rate like that would continue, as long as it was more profitable than the gold import : on the contrary, the promotive policy of the gold import was, to each nation concerned, no more than a move to stimulate it by compulsorily fixing the prime cost of gold import at such a level as the exchange rate would not reach the gold point ; far from violating the gold points, the exchange rate would show a trend as if it were stable enough to stay within their limits.[13]

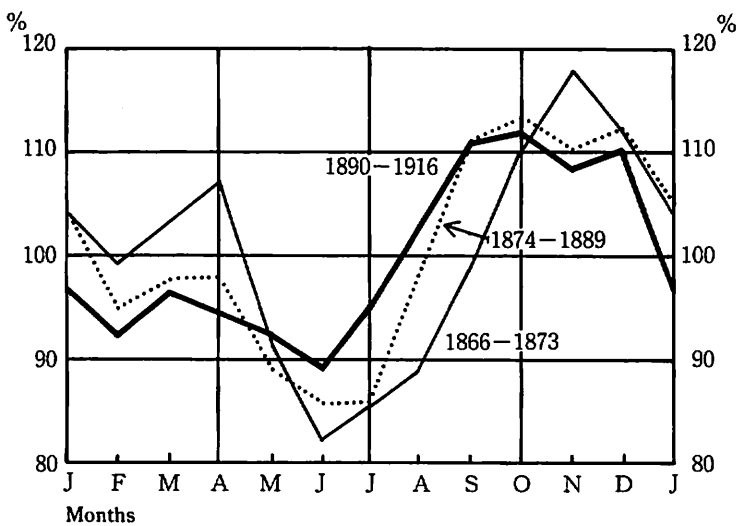
The conclusion is as follows : the gold market projected the artificiality, which was inflicted upon itself, on the foreign exchange market, on which the dealings were free from any requlation : in the case where the inhibitive policy of the gold export was adopted, it appeared as the phenomena which Morgenstern and Clark called "violations of the gold points" : "violations" did not imply that the foreign exchange market in the U.S. at that time had problems in terms of its development = integration, in other words was immature yet ; "violations" did not have their source in the factors internal to the exchange market, but in the authoritative interference on the gold market which developed outside it.

Well, in the case of insisting on the reduced variation of the exchange rate at the period the 19th century proceeded toward its end, however, another point leaves to be considered along with the "violations of the gold points" reviewed above. It is no less than the seasonality of the exchange rate variation in which Officer was not interested at all. Even in 1914 the fact was pointed out as follows :

> "Since the United States is still, in large part, an agricultural country, its exports tend to be periodic rather than uniform. The largest exports from the United States are in the fall after the crops have been harvested. But the things we buy flow to us in a more steady stream. Hence there is, in the fall, a relatively large supply of drafts on foreign countries, for sale in the United States, and a comparatively low price for them or low rate of exchange."[14]

The seasonal variation of the exchange rate and its chronological trend in question was an issue to which Edwin W. Kemmerer (1910), Cole (1929), and Myers (1931) had paid attention. Kemmerer researched it in the years of 1890-1899 and 1900-1908, Cole did it in the years of 1850-1860, 1880-1886, and 1897-1913, and Myers also did it in the years of 1879-1888, 1889-1900 and 1901-1913, and each one showed the results in a chart.[15] We cite here Myers' (Chart II). It designates that the exchange rate movements were seasonally uniform and, besides, the spread of the exchange rate variation tended to decrease as time went by. Hence, a question must be raised like this : although, from the late 19th century to the early 20th century, the export structure was unchanged from the previous days, why did the seasonal variability in the rate begin to conceal itself? Let's change the section to study it. The argument in the new section is no more than that of external integration of the American foreign exchange market.

Chart II Index of Seasonal Variation in Dollar-Sterling Exchange Rates at Different Periods



Source : Myers, *New York Money Market*, p. 330.

(1) Davis and Hughes, *loc. cit.*, pp. 70-72, Tab. A-1.

(2) *ibid.*, pp. 54-55.

(3) *ibid.*, pp. 53, 56.

(4) *ibid.* pp. 75-76, Table A-3.

(5) Perkins, "Foreign Interest Rates in American Finance Market : A Revised Series of Dollar-Sterling Exchange Rates, 1835-1900," *Journal of Economic History*, vol. XXXVIII, no. 2, June 1978, pp. 410-415, App. I.

(6) *ibid.*, pp. 405-406.

(7) Officer, " Integration," p. 565 ; cf. *ibid.*, p. 583, Tab. II.

(8) *ibid.*, pp. 582, 584.

(9) Sayers, *Bank of England*, vol. I, pp. 47-48.

(10) *ibid.*, p. 48.

(11) Clark, *loc. cit.*, p. 818.

(12) This criticism similarly applies to Morgenstern. cf. Morgenstern, *op. cit.*, p. 249, Chart 16.

(13) We assume, as above, that both the costs which command the gold shipment cost, that is, not only "the costs of transporting gold" but also "the costs of transforming gold," are constant for a fairly long period, because it is thought to be reasonable for a theoretical device of the (international) gold standard system. Therefore, it is, that the object of the policy for stimulating gold import and thwarting gold export we are facing is not deemed to be directly the policy of altering the gold shipment cost (in fact, "the costs of transforming gold"), but to be the policy of tampering with the free functions of the gold points mechanism.

But, from an angle of how the gold standard system actually worked during the days called to be the era of the classical gold standard system, we can't deny such a standpoint as to reckon it to be the former. It is just what was raised by Arthur Bloomfield : it regarded the policy of meddling with gold export as the measure to rise up the gold point and, on the other side, considered the policy of promoting gold import to be the operation to lower the gold point. (*Monetary Policy and the International Gold Standard, 1880-1914*, New York, 1959, rep. 1978, pp. 52-53.) According to this opinion, the argument of "violations of the gold points" itself, which Morgenstern and Clark advocated, would not have been able to come into existence. That is, as mentioned earlier, "violations" happened under the policy of intervening gold export but, from the view, those phenomena were results simply caused from the manipulation of widening the gold points spread and were nothing but the appearances which, under the condition that "the costs of

transforming gold" were raised, the gold points mechanism persistently realized itself. In this connection, we must show a sense of mysteriousness to Clark who positively cited Bloomfield's opinion as above, only to commit a contradiction.

(14) Harry G. Brown, *International Trade and Exchange, A Study of the Mechanism and Advantages of Commerce,* New York, 1914, pp. 82-83.

(15) Edwin W. Kemmerer, *Seasonal Variations in the Relative Demand for Money and Capital in the United States,* Washington, D.C., 1910, rep. New York, 1980, p. 142, Chart XXXVII ; Cole, "Seasonal Variation," p. 207, Chart III ; Myers, *New York Money Market,* p. 340.

III. External Integration in the Foreign Exchange Market in the U.S. (1) —The Emergence of the Forward Transactions for Foreign Exchange—

It was a result of increased use of the American finance bills drawn on London that during the period from the 1880s through the turn of the century the foreign exchange rate in the U.S. seasonally advanced its own stability. Reducing the seasonal variability of the sterling rate in the U.S. was nothing less than the self-expression of such a process as the American foreign exchange market was deepening the cooperation with the London international money market and, as it were, putting it into one of its inner elements. It was also a reason why the phenomenon is trying to be grasped from an angle of external integration of the American foreign exchange market. But, to some degree the development of the forward exchange dealings was absolutely necessary for expanding the use of the sterling exchange in financial transactions to be effective as to have historically changed the exchange market structure, and, besides, the forward exchange dealings themselves also contributed to decreasing the seasonal fluctuations of the market. It means that the consideration of the external integration of the American foreign exchange market

necessitates the turning of our eyes to the forward market at the period which it was coming into existence. It is just this task that we will carry out in this section.

Alex. Brown & Sons, which represented the Browns in Baltimore through an agency agreement, wrote to the House's Liverpool office, Brown, Shipley & Co., on January 12, 1879 as follows : "We have always declined to name rates for Exchange to be delivered in the future, as we believe is also the case with the New York house, and we do not see how it could be done under our system of closing the account each week."[1] And, when the seventh of the next month came, they informed more penetratively the same party of their critical stage in another letter :

> As to your suggestion that we should confer with the New York House in regard to purchasing exchange for future delivery, we would say that we have understood that they never make such purchases, and they do not seem to have considered the subject with favor when we have suggested it to them. We would like to be able to meet this desire on the part of shippers but the difficulties that occur to us are that to make sure of a margin in the exchange it would be necessary to sell at once against such time purchases, which meanwhile would leave our account with you short remitted, and involve a charge of interest that we could hardly cover by the rate at which we purchased, as we hear that sales are made at about the rate for immediate delivery …… If you think that these difficulties can be overcome or in some way avoided, we will be glad to hear from you, as we feel that to control our share of the business here we must meet as far as possible what may appear to be the requirements of the trade.[2]

We can learn two facts from what was cited above : that is, in Baltimore, by the early part of 1879, (1) the exchanges for future delivery began to be demanded on the part of exporters and were actually dealt with ; (2) but, its covering sales, which were inevitable in order to avoid the exchange risk, on the part of the exchange dealers had to be carried out on the spot (it means that there was little purchasing

of forward exchange arising from the part of importers). We must therefore ask ourselves : why did the demand for forward sales resulting from exporters strikingly increase at the window of AB & S form 1878 to the following year? ; how were such forward contracts really negotiated? Those questions are nothing less than a request for us to elaborate on the two facts as pointed out above. Let's try it next in order only to wrestle with the take of this section.

In a letter dated January 25, 1879, AB & S laid a view of their business circle for that year before the Browns' New York office, Brown, Brothers & Co. : "this season the bulk of shipments will be in francs, which will very much reduce our sterling bill purchasing."[3] That suggests that, although the Browns had confined themselves to deal with the exchange bills on London (they did not have any correspondent on the Continent), their agent in Baltimore was deepening a feeling of crises toward the incoming of a circumstance that increased franc bills began to be drawn in Baltimore since the previous year. If so, why did the franc bills increasingly start to be supplied to merchant bankers in Baltimore at that time? It was just because the grain exports heading for the Continent drastically expanded.[4] In the years of 1879-1881, which came under the period of the brilliantly swelling productivity of wheat, the West European nations including Britain were casually visited by harvest failures.[5]

Let's glimpse at the structure of American exports to Europe. The exports (the current price) during the period of 1871-1879 were up $344.8 million to $587.6 million by 70%. And, an item which most contributed to it was the crude foodstuffs (nonprocessed agricultural products). Its shipments to Europe of $33.4 million in 1871 were augmented by a conspicuous 450% to $182.2 million in eight years.[6] Thereupon, next, let's light upon the data of the wheat exports by nationality. It reveals that there happened to be an important change in this. In 1878, though

the wheat shipments to Britain, traditionally the biggest consuming nation for American agriculture, expanded twice as much as in the previous year, those to the continental countries drastically jumped up : to France an increase by 6.4 times ; to Belgium an increase by 2.8 times. In next 1879, in contrast to the decrease in exports to Britain, especially those to France exhibited a dramatic augmentation by 8 times compared with the preceding year, and those to Belgium also multiplied(7).

Judging from a letter from AB & S to the New York office on April 11, 1878, franc bills on Paris or Antwerp drawn by the grain exporters then came to be conspicuous in Baltimore.(8) Because the continental buyers directed to draw those bills. But, the Browns kept their hard posture toward handling franc bills. The reasons were like these : the franc exchange market in the U.S. was only a one-sided buying market which lacked a selling market ; "even in New York the demand for franc bills was unsteady, and it was anticipated that any large purchases of francs would, at times, have to be offset with sales of sterling bills" : besides, the senior partners in England opposed the transactions of franc exchange, because the collection procedure was extremely complicated, and because a French law ruled delivery on acceptance, that is, it "required the holder of a collateralized franc bill to release the bill of lading for the merchandise to the drawee on the date of formal acceptance," not admitting the holder's "option of holding the bill of lading as security up until the final payment date" (delivery on payment), unlike the case of England(9).

In these situations the Drexel-Morgan alliance (Drexel, Morgan & Co., in London ; Drexel, Harjes & Co., in Paris) which was represented by Robert Garrett & Sons, entered the Baltimore foreign exchange market through the dealings of franc exchange and, if the volume of franc bills drawn required, Drexel & Co. in Philadelphia as well

did on its own account.[10] In December 1878 Garrett purchased forward exchanges amounted to £100,000 from Gill & Fisker, a grain exporter, and within two months a trend toward increasing transactions of forward exchanges had become clear. In fact, there emerged even an exchange dealer in New York who began to regularly quote the forward rates through Baltimore brokers.[12]

Here we stand still and pay attention to two points in order to deepen our arguments in the latest paragraph. Firstly, it is that the purchases of sterling exchange for future delivery in Baltimore began to be carried out by the Drexel-Morgan alliance. What does that fact imply? They were foreign exchange dealers who had close connections with (not only London, but) the continental cities such as Paris, Antwerp and others. That the glorious dealer who introduced forward transactions into Baltimore was the Drexel-Morgan combine, not the House of Brown who certainly was the biggest dealer but had their strong points only in England (London, Liverpool), suggests that the techniques of forward exchange dealings in the U.S. originated in the Continent.[13] Because there were, on the other side, facts as follows : in the 1870s both the Anglo-American trade markets of grain and cotton had already developed their own future businesses[14], but regarding foreign exchange, as is commonly known, it was not until after the First World War that forward contracts became recognized in London[15] ; however, on the Continent, at least in Vienna and Berlin, the forward exchange market had already formed a part of their financial system by the 1880s.[16] But, it seemed that there was just an obstacle to exchange dealers, who had contacts with the continental money centers, in the case which they tried to transfer new devices toward the American foreign exchange market. It was no less than the dollar's instability due to the stop of specie payment. That is just another point we must focus on.

On January 2, 1879 the U.S. resumed the specie payment which had stopped for seventeen years. The law which ruled it was given Congress' approval four years in advance (January 14, 1875), and, as a result, two weeks before it was executed the premium on gold completely disappeared.[17] As it was in December 1878 when the Drexel-Morgan interests made a forward purchase of £100,000, we may regard it as the same transaction with that after the resumption in terms of the monetary stabilization. If that is the case, for what reason did the resumption stimulate forward exchange businesses, which were actually none other than purchases of exchange for future delivery from a standpoint of exchange dealers?

First, let's stand on the side of exporters only to consider it. Needless to say, if they can fix, at the time when they make trade contracts, that is, the export prices (assumed to be quoted in the foreign money) are settled, their conversion ratio of the foreign currency concerned into dollars in the time after shipping, they will certainly get the margin between the export prices and the first costs. Otherwise, when the exchange rate at the time of shipping demands, the exports prices which will be converted into dollars may be less than the purchasing costs. Of course, on the contrary, the exchange rate will possibly move toward the direction which is favorable for them. But, they originally aim to acquire the (average) export profit, not the margin emerged from the exchange rate fluctuations (speculation profit). Namely, it is just their first purpose that they don't lose any chance to get the reasonable export profit. Therefore, we can understand as this : if they were given some facilities that they could sell exchanges provided that they would deliver them in the future, they invariably had the motive that they were ready to take advantage of them. But, there emerged a problem on the side of their purchasers, that is, exchange dealers. Let's look at it.

There arose some difficulties on the dealers in terms of how the exchange rate in the future was settled as of now. They would particularly become serious under the situation that the current rate unstably moved. Because, the dealer's primary end is to earn a spread between two transactions, that is, the purchase of exchange from one customer and its sale to the other ; the speculation on which the rate shifts in the future are staked is nothing but a secondary or derivative business to them. The resumption that would bring forth the stabilization of the dollar value had enough reason to let those dealers entertain hope like this : as far as it would continue, the exchange rate would not move across the given limits of parity, in other words, the extreme variation of the rate would be excluded through the work of the gold points mechanism. As well, in the case of the dealers of continental origin, the forward exchange transactions had already begun in their home countries. Thus the foreign exchange dealers who had correspondents on the Continent are supposed to have ventured on forward purchases in the U.S., too.

From our previous study we learned how the purchasing market for forward exchanges emerged in the Baltimore foreign exchange market during the period from 1878 to 1879. Let's proceed to search into its actual states.

The age of emergence of the purchasing market for forward exchanges in Baltimore was also that which the Browns began, no doubt, to expose its ascendancy over the foreign exchange market into menace. In the letter of February 7, 1879, which has once been cited above, AB & S complained that, without meeting as far as possible the demand for forward exchange sales arising from the exporter's sector ("what may appear to be the requirements of the trade"), they would not be able to keep their leadership position in the exchange market. Then, by April BB & C as it is changed the Browns' traditional

lines of business only to begin to instruct on the handling of the sterling purchased for future delivery.[18] But, the forward purchase operation by AB & S could not come to start being seriously tackled. For that there was left a problem to be solved beforehand, as mentioned soon later. The Browns at last began to get down to the purchases of forward exchanges in earnest from August 14 from when the New York office started regularly quoting the rates for those. That is, the day BB & C issued directions to buy bills delivered within one month at the same rate normally paid for three-day sight bills (the standard short remittance) and to take bills delivered within two months at a rate of $0.1, or 0.21%, below than that : concretely in the case of the former $4.79 and in the case of the latter $4.78.[19]

By the way, there was an obstacle which had to be cleared away inside the Browns in order that AB & S could be positively dispatched to buy forward exchanges. It was no less than an interest risk problem which was caused from their forward buying activities having no method of offsetting sales but those of three-day bills. The existence of such an interest risk was also pointed out in the letter of February 7, 1879, AB & S to BS & C, Liverpool, which has been often referred to : that is, the exchange transactions themselves engaged for a margin of 0.5% to AB & S — as also mentioned later, the Browns quoted the rates in order that they could get a balance of 0.5% between buying and selling operations —[20] but discrepancies of the terms between forward exchanges and three-day bills would certainly cause their sterling balances to decrease in the interim and in its turn might cause them to suffer a deficit on which the Browns' English offices would charge the interest rate of 5% a year. Because it was the Browns' traditional policy that the custmer's account in sterling was debited at the yearly 5% interest rate (, but the same rate was applied on credit balance as well).[21] AB & S as an agency had to obey the rule. In

such an early stage as the forward market lacked the selling market, the resolution of an interest risk problem as above can be, no doubt, said a precondition in order that the Browns might really enter into the forward market transactions.

However, to our regret, we can't fully explain how AB & S agreed with the New York office to settle this problem. But, if we are able to based on the fact that, as stated above, after mid-August both came to start positively joining a new area of the foreign exchange market, won't we be allowed to reason like those?

That is, first, let's pay attention to the fact that less than two months before, on June 24, AB & S proposed that the New York office separate the forward account from the current account : "when transactions are finally closed by payment for the bills here, the balance, including such interest as we might be able to earn [should] be then transferred to London" ; while their competitors "are working on the basis of current rates," the traditional pattern of 5% interest charge on any accounts concerned with forward transactions "precludes the possibility of business."[22] We can without error consider this proposal to be, as it were, what urged the Browns to give up their conventional policy associated with the interest rate. And, the New York office is assumed to have actually decided to bring AB & S to terms in those directions, because by next July an epochal change was also carried into effect in another point. That is, in a letter dated July 31, to the New York office, AB & S revealed that "the London office has written that we are to remit all bills we take drawn in franc to Comptoir d' Escompte de Paris.[23][24]" It is that the Browns (the London office) secured a correspondent in Paris. The fact implies that the Browns changed their policy, which had kept being maintained since the House was established, that they had confined their operations within handling sterling exchanges, and at length intended to enter into the

franc exchange market,[25][26] which they had evaded though under the reasons as mentioned above. In fact, they started handling the franc forward by August 25.[27]

Well, the background circumstances of the emergence of the Baltimore forward exchange market (buying market) from 1878 to 1879 and the truth of its transactions have been elaborated. We must here submit the last task : why could the emergence of the forward market as reviewed above effect to lessen the seasonal variation of the exchange rate?

Now that the sales of exchange for future delivery came to be possible on the sector of exporters, they could be saved from a probable disadvantage of lower rates in such a case as they could only sell on the spot. Because, under such circumstance, it might highly happen that some exporter's supply of exchanges inopportunely fell on the time when other exporters' sale contracts of exchanges were flooded with. As said earlier, exports almost concentrated during the period from summer to December. It could also be called the season of lower exchange. But, it comes that exporters mostly know a few months beforehand how much they export, and if they could beforehand make sale contracts of bills which they are to get in place of shipments, they would possibly take advantage of more favorable rates.[28] In other words from another angle, that exporters were given the facility of being able to sell exchanges for future delivery implied that they generally acquired, as it were, an option of selling rate. It is also that sales of export bills would begin a few months earlier than usual, and hence the degree of its seasonal concentration would fall. Needless to say, those would cause to restrain the seasonally radical declines of the exchange rate.

However, even if the forward exchange market emerged, as far as it was partial to the buying market, dealers would be one-sidedly

forced to shoulder the exchange risk. Because, under the market situation that there was scarcely demand for forward purchases arising from the importer's side, their forward purchases would only be able to be covered by the spots sales. And, it is plain that the development of the forward market would be limited as far as forward sales transactions could not be operated by them. But, as the 19th century drew near its end, that sort of difficulty was also conquered. The forward selling market appeared at the same time as forward purchases rather became necessary to set dealers free from the exchange risk, not the business only to impose it on them. Though in 1913, it developed so much as Esher said that the forward dealings were an indispensable factor in the contemporary foreign exchange operations.[29] We must go on with our dispute toward the borrowing from England in the way which exchange bills were used.

(1) AB & S, Baltimore, to BS & C, Liverpool, January 12, 1879, "Alexander Brown & Sons Papers" (hereafter abbreviated to AB & SP).
(2) *ibid.*, February 7, 1879.
(3) AB & S, Baltimore, to BB & C, New York, January 25, 1879, AB & SP.
(4) Perkins, *Anglo-American Trade,* pp. 212-213 ; do., "The Emergence of a Futures Market for Foreign Exchange in the United States," *Exploration in Economic History,* vol. II, Spring 1978, p. 197.
(5) Morton Rothstein, "America in the International Rivalry for the British Wheat Market, 1860-1914, "*Mississippi Valley Historical Review,* vol. 47, December 1960, p. 402.
(6) Matthew Simon and David Novack, "Some Dimensions of the American Commercial Invasion of Europe, 1871-1914 : An Introductory Essay," *Journal of Economic History,* vol. XXIV, no. 4, 1964, p. 596, Tab. 2.
(7) *Annual Statements on the Commerce and Navigation of the United States,* for the fiscal year ending June 30, 1877-1879, U.S. Treasury Department, Bureau of Statistics (Washington, 1877-1879), quoted in Perkins, "Futures Market," p. 209, Tab. 2.
(8) AB & S, Baltimore, to BB & C, New York, April 11, 1878, AB & SP.
(9) Perkins, "Futures Market," pp. 199-200, n. 17.

(10) Perkins, *Anglo-American Trade,* pp. 213-214 ; do., "Futures Market," p. 198.

(11) AB & S, Baltimore, to BB & C, New York, December 10, 1878, AB & SP.

(12) *ibid.,* January 28, 1879, AB & SP.

(13) Perkins, *Anglo-American Trade,* pp. 222-223 ; do., "Futures Market," p. 210.

(14) Rothstein, "The International Market for Agricultural Commodities, 1850-1873," in, David T. Gilchrist & W. David Lewis (eds.), *Economic Change in the Civil War Era,* Greenville, Del., 1965, p. 70. On this subject in the case of the Liverpool cotton market, cf. Thomas Ellison, *The Cotton Trade of Great Britain,* London, 1886, rep. 1968, Pt. II, Chaps. IV-VII.

(15) Paul Einzig, *A Dynamic Theory of Forward Exchange,* 2nd ed., New York, 1968, p. 42.

(16) *ibid.,* p. 7 ; Henry Deutsh, *Transactions in Foreign Exchanges,* London, 1914, p. 173.

(17) Myers, *A Financial History of the United States,* New York, 1970, pp. 193, 195.

(18) AB & S, Baltimore, to BB & C, New York, April 13, 1879, AB & SP.

(19) *ibid.,* August 14, 1879, AB & SP.

(20) AB & S, Baltimore, to George Bain, cashier, Exchange National Bank, Norfolk, June 1 & September 24, 1878, AB & SP.

(21) George Brown, Baltimore, to William Brown, Liverpool, February 7, 1837, AB & SP.

(22) AB & S, Baltimore, to BB & C, New York, June 24, 1879, AB & SP.

(23) Compton d' Escompte de Paris was referred to in, Rhondo Cameron (ed.), *Banking in the Early Stages of Industrialization,* New York, 1967, p. 107.

(24) AB & S, Baltimore to BB & C, New York, July 31, 1879, AB & SP.

(25) That the Baltimore foreign exchange market developed the franc market besides the sterling market in its inside, and further added the forward market, on the other hand, meant intensively increased competition among exchange dealers in Baltimore. In fact, dealers in New York and Philadelphia, who quoted their rates through local brokers, were often willing to transact on margins of 0.25% or less. The Browns, who had done their business at the 0.5% margin, were compelled to violate the rule. (*ibid.,* February 19, March 4, April 5, April 9, July 25, July 31, September 29, Octorber 9 & etc., 1879, AB & SP.)

(26) Now that the franc rate was quoted in the American foreign exchange market, exchange dealers, who had their correspondents on the Continent besides London, are assumed to have been given opportunities to embark on arbitrage transactions among dollar, sterling, and franc. The resumption

of specie payment would have made the exact calculation of the arbitrage rate possible and likely unbalance between it and the actual rate would have allowed dealers with foresight to positively earn arbitrage profit. But, actually, the extent of what degree it activated is not apparent. But judging from the fact that Margraff set one chapter to analyze arbitrage transactions in his book published in 1914 as cited above, we will not commit an error if we think that they started to be broadly operated by then.

(27) AB & S, Baltimore, to BB & C, New York, August 25, 1879, AB & SP.

(28) Esher, *Elements,* pp. 35-36 ; do., *Explained,* p. 26 ; Brown, *op. cit.,* pp. 98-99.

(29) Esher, *Elements,* p. 105.

IV. External Integration in the Foreign Exchange Market in the U.S. (2) — The Increased Use of Bills on London in Financial Transactios —

The way of drawing bills on London in the U.S. to borrow from there did not date for the first time from the era under review. It appeared on a large scale at the boom in mid-1836, which resulted in the 1837 panic, and, more, prior to that, was what the Second Bank of the U.S. did toward Baring Bros. & Co. in the late 1820s.[1] From the end of the 19th century through just after its turn as well, American banking institutions could likewise raise sterling from London bankers ordinarily by giving list stocks on the New York Stock Exchange as security or, if circumstances permitted, without collateral.[2]

That is, under the agreement with London banks, American bankers drew, on the basis of their own initiatives, sterling bills on them. Their terms usually were sixty or ninety days (sixty or ninety days after sight), but, of course, in such cases as bills were allowed to renew before they fell due, the period of borrowing could be extended by renewed bill's terms. In return for charging fees, London banking institutions gave such rights to draw bills on themselves to American banks and accepted them when they arrived in London to be

presented. American banks were also at liberty to sell them in the foreign exchange market if they needed dollars. As will be stated later, large banks (national banks) handled foreign exchanges in those days.

The bills which drawers in the U.S. drew in order to borrow for themselves, as mentioned above, were none other than those called finance bills.[3] They beforehand arranged with drawees, London banks, on credit limit, term of bill, payment condition, further existence of security, and the like. But, during the period we are facing, despite the instance where London bankers were ready to lend for the U.S., sterling bills which were drawn, in the same way as the case of finance bills, by American banks appeared. Both were not different from each other in the point of long term bills on London which were drawn by American banks, but each purpose for which they were drawn was not the same. That was the reason Esher insisted that such bills as the latter should be defined as loan bills in distinction from finance bills like the former.[4] But, in our opinion, it is necessary that they were not only distinguished like that but also generalized at the same time. Because, both were common as for the form in the way which foreign exchange bills were used in the financial transactions. Esher lacked such an angle.[5] We understand that both finance bills and loan bills are integrated under the conception of finance bills in a broader sense. In the case where we hereinafter refer to as finance bills, they are what are based on Esher's opinion, namely, finance bills in a narrower sense, if without leave.

Well, the drawing mechanisms of finance bills were explained above. Regarding this, how about the case of loan bills? It was as the following : assume that a London bank (hereinafter referred to as L Bank) which intended to lend sterling for sixty or ninety days in the New York market asked their correspondent in New York, for example, New York Bank (hereinafter abbreviated to NY Bank) to find out

borrowers and draw bills maturing in the relevant days on themselves ; then, after contacting, NY Bank would fill up their agreement, as promised, as a representative or normally under the common account ("joint account") ; finding out a borrower, for example, American Co. (hereinafter abbreviated to A Co.) through a broker, NY Bank would draw the sterling bill for sixty or ninety days after sight on L bank : so far as it goes, NY Bank, a drawer, was no less than a borrower ; but, after taking security (the listed stocks and bonds similarly in the case of finance bill), if necessary, NY Bank next dilivered the bill to A Co. ; it was A Co.'s turn to sell the bill in order to get dollars ; and, the transaction would be done at the window of the same NY Bank, since NY Bank, a drawer in this instance, was usually a foreign exchange dealer, too.

Anyway, the sterling bill which A Co. sold was sent to London through its buyer, an exchange dealer, and accepted there by a drawee, L Bank. (Thereafter, it would be passed on to the London discount market.) It would mature in sixty or ninety days, but ten days prior to the due date A Co. had to pay back in the demand bill quoted in sterling of which value amounted to the borrowed sum plus the fixed fee. It comes to this, that, deducting the appointed commission from that value, NY Bank remitted the remainder to London. It would reach there a few days before the original bill's life expired.

It is evident that the exchange risk befell A Co. in the foregoing dealings. Because, the amount of the dollar, which it got by selling the sterling bill for sixty or ninety days after sight, did not always agree with the dollar price of the demand bill in sterling which it had to buy to reimburse. It also implies that this borrowing of English money afforded a borrower like A Co. an opportunity which it might take to gain the profit out of the exchange speculation : in fact, as mentioned below, getting the marginal profit resulting from the

unbalance between the selling price and the buying price of exchanges (, which would bring a cut of the interest charge on A Co.,) were intended by borrowers. But, be that as it may, for extension of this loan technique, the method which borrowers can guard themselves from the exchange risk in question would, on the other side, have to be provided for. It is a subject which will be referred to later.

Now, however, the Anglo-American financial transactions by loan bills were not restricted to the borrowing of the sterling ("sterling loan"). The borrowing of dollars ("currency loan"[6]) were also done by them. In this case, the exchange risk would be borne by a lender, L Bank (in the case of an exclusive lending), or be jointly assumed by L Bank and NY Bank in the case of a lending by the common account : that is, NY Bank, a drawer, delivered dollars for the sterling bill on L Bank to A Co., a borrower, not the bill itself ; since A Co. was assumed to pay the interest, not the fee, it would settle the borrowed sum (in dollars) plus the interest for sixty or ninety days on the date for payment : receiving it, NY Bank would draw from it its own share under the agreement, and send the demand bill in sterling, which would be bought by the balance, to the L Bank.[7]

From our previous study, we learned that, in any case of lending by finance bills or loan bills, in other words, in the lending by finance bills in a broader sense, both lender banks in London and their correspondents in New York could have obtained the fee and the interest only if the former would have signed and accepted the bills sent to them by the latter. However as low the rate might be, these transactions were acceptable to them. But, of course, their expansion was conditioned : that is, it depended upon the extent of what degree the London discount market was capable of absorbing such bills as created ; since it is the case that sterling bills drawn in the process of borrowing in the U.S. had to be after all discounted in the London

market, if it denied to accept bills of this kind, their drawings could not help being depressed.[8] On the other hand, some conditions were assumed to exist in the side of the U.S., too. Because, as borrowers, and lenders as well in certain circumstances, had to shoulder the exchange risk, so far as some mechanism for evading it was not ready for them, it would not have been possible that the device of transactions under review had been used as universally as it actually was. Needless to say, bearers of the exchange risk in the financial transactions which used the foreign exchange bills could be free from such risk only to preserve themselves, if they could purchase forward exchange by setting their delivery dates to the due dates of original bills. It is the emergence of the forward exchange market that was no more than the condition in the side of the U.S. for the development of the way of borrowing from London which used finance bills and loan bills. And, it became an opportunity which not only stimulated the growth of the forward buying market but also urged the formation of its selling market, as will be clarified next.

Since in the late 1870s foreign exchange dealers started purchasing forward exchanges. But, in that particular time as there was no demand for forward purchases arising from the side of importers, they had to cover their purchases with corresponding sales on the spot. That is what was looked into in the latest section. But, how about if they were to have to bear the exchange risk resulting from the dealings of finance bills or loan bills (currency loan)? The purchases of exchanges for future delivery can become the contracts which would offset the risk : then, those will be positively done ; the buying market for forward exchanges will be given an impulse toward the development not only from customers (exporters) but also from exchange dealers. On the other side, in such cases as borrowers by sterling bills are non-exchange dealers like A Co. and so forth, forward

exchanges in sixty or ninety days will be purchased by them from dealers. The demand for forward selling in the dealers' dimension here comes to be able to find out its counterpart. And, really, the dealers' demand for forward sales did not arise only from forward purchases from the exporters' sector, as discussed in the previous section. While they bought only spot exchanges, they could furnish forward, and needed to actually do so. Why? Next, we proceed to its analysis in order to reveal that the forward exchange market in the U.S. in the late 19th century developed considerably as the hedging market.

Exchange bills which dealers bought from exporters were mainly documentary bills with long terms, such as thirty, sixty, or ninety days after sight. And, they were classified into two kinds : "acceptance" and "payment" bills. In the instance of the former, shipping documents were delivered to importers under the condition that drawees in England (importers themselves or credit issuers) accepted the bills : importers could procure the shipments at the same time when the bills were accepted, and at once embark themselves in their sales. On the other hand, the latter were nothing but the bills which made it a condition that shipping documents were delivered after payment : in this case, drawees could be rebated, though lower than the discount rate, if they paid before the due date.

And, the former of those two classes, "acceptance" bills, could be discounted in the London market. The fact implied that exchange dealers who purchased them could make sterling balances immediately if they sent them to London and had them discounted after acceptance. But, the case of the latter, "payment" bills, was another. As their dates of payment were not decided, they were denied to be discounted in London.[9] It mean that, even after having arrived in London, they didn't bring forth London balances until they were really paid. Its

implication to dealers was that they had to expose themselves to the risk of the rate decline which might happen in the interim. Their exclusive policy to guard themselves from such risk was forward sales, as an example is given as hereafter. Let's assume there was a dealer who bought "payment" bills at £25,000 and sent them to London ; he must have been able to conjecture the dates of payment empirically from how the said drawee behaved himself in his payments by then ; and he would be better only if, consistent with those guessed dates of payment, he sold forward, such as at £5,000 for delivery after fifteen days, at £10,000 for delivery after thirty days, and at £10,000 for delivery after forty-five to sixty days, and the like.[10][11][12] The cotton export bills were "acceptance" bills, but the grain export bills were "payment" bills. So, we should consider that the necessity of exchange-dealers' forword selling was pretty high.

The Anglo-American financial transactions based on the foreign exchange market are concluded to have given an occasion toward the formation of the forward (buying and selling) market in the U.S., as studied above. We will be able to state that it was useful to the stabilization of the exchange rates through its functioning as the hedging market against the exchange risk. But, drawings of loan bills and finance bills worked themselves to level the exchange rate deviation, too. Because those were done after considering the fact that the rates seasonally fluctuated.[13] Ira B. Cross declared as below (1923) :

> "Loan bills and finance bills have for many years past played an extremely important part in the foreign exchange market. Before the World War it was customary for from $300,000,000 to $500,000,000 to be outstanding in the spring and the early summer months when exchange rates were usually high with the possibility of a decline in the fall as the crops began to move toward European countries. Bankers, brokers, and large industrial concerns have made wide use of them as a method of obtaining money at low rates, in many cases

as low as 1 to 1¼ per cent per year."[14]

That is, being able to borrow sterling when rates are seasonally high and return it sixty or ninety days later when rates decline, borrowers would be able, to be sure, to gain the margin from the difference of those two rates : then, the borrowing of sterling by loan bills and the using of finance bills began to augment from two or three months prior to the export seasons ; it is that the supply of sterling bills began to increase from the spring when they must have been in short without drawings of such loan bills and finance bills : as a result, on the other side, in the export seasons during which sterling exchanges were increasingly supplied, the demand for the purpose of repayment started growing. Such things as those were pointed out by Cross. Seasonal deviations in the demand and the supply for sterling exchanges were moderated by finance bills and loan bills.[15][16] Exchange rates must decrease their seasonal variation.

As we have seen, at the transition of the 19th century toward the 20th century, developing the forward market also in the interior by becoming the market for raising English money, the foreign exchange market in the U.S. enriched the quality as the foreign exchange market. That just appeared as the declining seasonality of exchange rates. It was none other than external integration of the foreign exchange market in the U.S. and, actually, was a course which banks (national banks) entered into the foreign exchange market, too. After termination of the Second Bank of the U.S. in 1836, exchange dealers wholly in charge of the American foreign exchange market were private bankers represented by the Browns. Banks dealing with exchanges in the New York foreign exchange market as of 1870 were only four.[17] But, of course, when 1904 came round, such a transition as under emerged : "the recognition of their [the Foreign Departments'] importance was

so universal that we find today, practically, every bank of prominence operating Foreign Departments in conjunction with their banking business."[18] (Not touching on the approval or disapproval of opening foreign branches), the National Banking Act (June, 1864) originally permitted banks to sell and buy foreign exchanges, deal with letters of credit, and the like.[19] It was not the case that there specially was some legal alteration behind the change above. Banks only robbed private bankers who specialized in foreign exchange dealings.[20][21] It is of course that that was backed by the development of foreign trade in the U.S., but we should regard that as what was stimulated by relatively reducing the risk (the unstability of the exchange rates) befitting the foreign exchange market in the 19th century. We add that some trust companies began to embark themselves in the handling of the foreign exchange on a large scale.[22]

(1) Norman S. Buck, *The Development of the Organization of Anglo-American Trade, 1800-1850,* New Haven, Conn., 1925, rep. New York, 1968, pp. 155-156 ; Ralph W. Hidy, *The House of Baring in American Trade and Finance, English Merchant Bankers at Work, 1763-1861,* Cambridge, Mass., 1949, rep. New York, 1970, p. 97.

(2) Margraff, *op. cit.,* p. 36.

(3) But, there was such an instance as drawn under the common account with a drawee. It was such a case as this : when an American bank forecast a rise in price of a certain security in the future, it offered a London bank to buy the security with joint liability ; the former drew, with the latter's consent, for example, a ninety-day sight bill on the latter, only to acquire the said security by the money for the bill, and then could share a margin with the latter by its sales after an advance in price. When the actual price went against their expectations, they took a measure to renew a bill. (Esher, *Elements,* pp. 133-135 ; Brown, *op. cit.,* pp.93-95.)

(4) Esher, *Elements,* pp. 57-58 ; do., *Explained,* pp. 102-103.

(5) The criticism can be applicable to Brown (*op. cit.,* pp. 85-93) and Ira B. Cross (*Domestic and Foreign Exchange, Theory and Practice,* New York, 1923, pp.

206-207), who followed after Esher, too. On the other side, Albert C. Whitaker said as those : finance bills and loan bills in Esher's opinion were economically or financially the same in substance and effect ; then, it was not necessary to distinguish between them, but it was simply better if they were unified only in finance bills. (*Foreign Exchange*, New York, London, 1922 (1st ed. 1919), p. 380, n. 10.) But, going through the appropriate passages in the item "borrowing by exchanges" (*ibid.*, chap. XII), we can find out that some items were set up and the explanations were opened out in the form of going with Esher's distinction between loan bills and finance bills. (cf. *ibid.*, pp. 359-369.) Among such views, C.A.E. Goodhart's that finance bills were of two kinds, loan bills and finance bills proper" (*The New York Money Market and the Finance of Trade, 1900-1913*, Cambridge, Mass., 1969, p. 56, n. 34) is near to ours.

(6) This name was what followed after Esher, as also seen from next note (7). Whitaker directly called it "dollar loan." (*op. cit.*, p. 359.)

(7) Esher, *Elements*, pp. 85-94 ; do., *Explained*, pp. 91-98 ; Brown, *op. cit.*, pp.85-86.

(8) Esher, *Elements*, p. 91.

(9) Margraff, *op.cit.*, p. 115 ; Esher, *Elements*, p. 49 ; do., *Explained*, pp. 43-46 ; Brown, *op. cit.*, pp. 69-70.

(10) Margraff, *op. cit.*, pp. 56-57 ; Esher, *Elements*, pp. 102-103 ; Brown, *op. cit.*, p. 99.

(11) Pointing out that such forward sales were nothing less than short selling, Brown uttered that the finance bill and the loan bill were the same in principle. (*op. cit.*, p. 100.) Judging from that he followed after Esher, who advocated to make a distinction between finance bills and loan bills (cf. n. (5) in this section), his opinion admitting the equality in fundamentals of them from an angle of short sales, is taken to be suggestive of the necessity of lighteing such a side, too, as the forward handlings could also be developed as (not only the real demand and supply transactions, but) the fictitious ones. Because, we can view that Esher intended to estimate the forward businesses in the side of the real demand and supply transactions. (Esher, *Elements*, p. 102.) Esher's attitude in the case of dealing with the forward transactions may reflect the era of the outset of their emergence that, as we studied in the previous section, they were brought in the U.S. with the object of securing the safety (avoiding the risk), for a contemporary Margraff also expressed the same view as Esher. (Margraff, *op. cit.*, pp. 54-55.) We add that in literature after the War the forward transactions came to be argued as operations used for both

the purposes of hedging and speculating. (*cf.* Cross, *op. cit.*, pp. 497-501 ; Thomas York, *International Exchange, Normal and Abnormal*, New York, 1923, pp. 77-81 ; Whitaker, *op. cit.*, pp. 381-391.)

(12) Then, who purchased such forward exchanges? First, in the dimension of the transactions with customers importers can be supposed, but both Margraff and Esher did not refer to them. But, in Deutsch's book, *(op. cit.*, p. 173),pub. in 1914, a year after Esher's *Elements*, the demands of the American importers for forward purchases to meet the demands of exporters for forward sales were touched upon. Furthermore, we add that in the same book the interest spread between England and the U.S. was pointed out to be also influential to the forward rates. (*ibid.*, p. 175.) Next, exchange dealers can be assumed. In such circumstances as they took the exchange risk arising from finance bills and loan bills, they would buy forward in order to evade it. It is the case that the forward exchange dealings came to develop in the dimension of the transactions among banks.

(13) In such a meaning we should not overestimate the existence of the forward market as a stabilizer of exchange rates. Goodhart said that, judging from literature written by some contemporaries such as Margraff, Esher, and the like, there certainly existed the forward market in New York at the period under review, but there were no statistics on forward exchange rates extant. (Goodhart, *op. cit.*, p. 57.)

(14) Cross, *op. cit.*, p. 215.

(15) Margraff, *op. cit.*, p. 39 ; Kemmerer, *op. cit.*, p. 141 ; Esher, *Elements*, p. 97 ; do., *Explained*, p. 105 ; Brown, *op. cit.*, pp. 88-90, 91-93 ; Cross, *op. cit.*, pp. 213-214 ; Myers, *New York Money Market*, pp. 344-345.

(16) That such an estimation of the influence of finance bills and loan bills upon exchange rates was never over can be inferred from a contemporary Margraff's description on finance bills — these may safely be said to be the same as our finance bills in a broader sense, as he did not distinguish between finance bills and loan bills — as follows ; "Finance Bills constitute one of the most important features of international banking operations and in consequence command paramount attention. Indeed, the immense development of American industries within the last decade was accomplished through the expenditure of enormous sums of money raised principally by American Finance Bills." (Margraff, *op. cit.*, p. 34.)

(17) Myers, *New York Money Market*, p. 348.

(18) Margraff, *op. cit.*, p. 13.

(19) cf. The National Bank Act, Feb. 25, 1863, Sec. 8, in Herman E. Cross (ed.),

Documentary History of Banking and Currency in the United States, vol. II, New York, 1969, p. 1386.

⑳ Margraff, *op. cit.*, p. 13.

㉑ In *Explained*, pub. in 1917, Esher came to use the term of foreign exchange banker, which was not used in *Elements*, pub. in 1913, yet. That is shown in the passages which he similarly dealt with banks as a component part of the foreign exchange market. That is, in the latter those are confined to be referred to as "the larger banks and banking house have a foreign exchange manager, or partner ……" (p. 59), but in the former such a phrase as "there are a great many foreign exchange bankers all in active competition" (p. 54) is witnessed. In terms of only the word of foreign exchange bank, Brown used it earlier in 1914, though. (Brown, *op. cit.*, p. 65.) But, foreign exchange banks in this Brown's case would not imply commercial banks, which Esher conceived, but a private banks specialized in foreign exchange operations. (cf. *ibid.*, pp. 65-66.)

㉒ Myers, *New York Money Market*, p. 348.

CLOSING

The foreign exchange market in the U.S. from the end of the 19th century through the 20th century deepened the degree of external integration, after attaining internal integration in the era before and after the Civil War. That is what we have seen in the above. The depiction by Cecco below is none other than what was described in the dimension of the central bank how such external integration of the foreign exchange market in the U.S. progressed : "The United States used the London money market as its central bank, as it did not have one of its own until 1913. London thus had to absorb all seasonal oscillations in the American demand for money and to cope with all the U.S. crises that resulted from a combination of seasonal and exceptional disturbances."(1) We must turn a field of vision to England and study the process of external integration in the U.S. taken up in this paper from the side of the London money market.

(1) Cecco, *op. cit.*, p. 120.