CURRENCY AND CREDIT IN EGYPT

BY

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The comparative simplicity of the Egyptian currency system renders it of unusual interest to the student of currency matters. In this essay it is proposed to outline very briefly the system at present in force, and then to carry the discussion further and ascertain as far as possible from statistical data in what way that machinery has actually carried out the task allotted to it in the last few years.

In the abstract, the currency system is simplicity itself: cotton is the life-blood of Egypt, and in order to keep this in good circulation, borrowing from foreign countries *via* London is resorted to. Banks in London which desire to finance the export of cotton from Egypt place sterling funds at the disposal of their Egyptian branches, for example; the latter sell these funds to the National Bank of Egypt, which can then buy Treasury Bills in London against which notes can be issued in Egypt. These notes are utilized in financing the movement of cotton up-country, and until the cotton reaches the port of Alexandria ready for shipment, the financing is done largely by notes rather than by bank credit. Egypt is still backward in that respect and bank credit has by no means superseded ordinary cash transactions. By the time the cotton is ready for export, however, it is being financed by the discount of exporters bills; that is to say, bank credit is replacing the more primitive system of cash transfers. During the currency of these bills, the cotton crop is still being financed by London, but as the bills are usually freely discountable in London for account of the Egyptian branches of the banks concerned, the flow of funds is reversed by the time the cotton season is drawing to its close: banks in Egypt are repaying their borrowings from their offices abroad, they are handing Egyptian pounds to the National Bank of Egypt and asking for sterling transfers to London in exchange. The National Bank must then sell some of the London assets of the Note Cover (*i.e.* Treasury Bills) and must withdraw notes from circulation in Egypt. Accounts of the majority of bank clients in Egypt are in debit during the crop-moving season (three or four months) and tend to become creditor during the remaining months, especially

in the case of cotton shippers. There is a short inflow of funds from London in winter, and a much longer outflow during the rest of the year, the rapidity of the inflow depending not only on crop conditions and cotton prices in Egypt, but also on monetary and credit conditions in London and elsewhere.

That, in brief, is the system of currency which has operated in Egypt since 1898, the date of the foundation of the National Bank of Egypt, (1) and the tap through which the currency is poured is the Note Issue Department of the National Bank. The discussion does not stop short here, however, for there are two important points which require investigation; firstly the question of the relationship of the currency circulation with the visible trade balance, and secondly the relationship of the Issue functions of the National Bank with its Commercial banking functions. In the first place it must not be assumed that the total note circulation will necessarily be related more closely to Cotton movements than to anything else; this may hold good, as we shall see presently, for the circulation in crop-moving months to some extent, but for the rest of the year other considerations must be examined. We hope to show then that note circulation rather depends on a number of incommensurable factors, including both import and export trade, and that the *seasonal* movement is of more interest than the secular movement so far as visible trade is concerned —and it will be shown that, according to statistical data prepared, the monthly Trade Balance has a very definite and close relation to the monthly deviations of the total monetary circulation from the 12 months moving average thereof. By this we mean that if we compare the total circulation of any two years, and also the total cotton exports of the same two years, although we are almost bound to see some relationship between monetary circulation and cotton exports, the whole price structure of the two years may differ entirely, so that we should not be justified in drawing any conclusion from the apparent relationship; whereas if we take the *seasonal* movement of both Circulation and visible trade balance we may feel justified in comparing them, since in effect we are averaging out any discrepancies which

(1) The description necessarily suffers with brevity, but the complications which arise in actual practic will appear later in this essay, eg. exporters who finance their own business; also, up to the war, much gold was still used to pay for cotton.

may be the result of the price structure differing from year to year. Moreover although the cotton crop, forming as it does such a large percentage of the exports of Egypt, causes most of the Seasonal movement in Circulation, and although it is also responsible for a certain time-lag (which will be noticed later) between trade balance and circulation owing to the method of financing the exports, nevertheless it is more justifiable, in theory at least, to attempt to link up the seasonal movement of the *total* trade balance with that of the currency circulation.

Taking a broad view of the trade of Egypt, we may say that the foreigner has to pay for Egypt's exports—mainly cotton— and must therefore place funds in the hands of the shipper for payment to the fellah or producer : this will apply to any export from Egypt : consequently, when the trade balance is very favourable to Egypt, the currency circulation must increase, *i.e.* a seasonal expansion of credit and currency must occur. On the other hand, when goods are imported the credit situation is affected first, by the issue of documentary credits, and the consequent blocking of funds in the accounts of the banks' customers ; and then, *after* import, when goods are being sold in the interior, the actual contraction in the currency and credit structure resulting therefrom takes place. Since imports are much more evenly spread over the year than the exports (the latter taking place in the winter months mainly of course) the lag of money payment behind the import of goods is fairly constant and is thus not noticeable in the data—whereas the payment for cotton upcountry precedes in most decided manner the actual export of cotton and other commodities, and in view of the regularity of the seasonal nature of the exports we may expect to find the monetary structure showing signs of the influence of cotton exports in the form of a time-lag. Thus although in principle it seems to be wrong to compare the monetary seasonal movement only with cotton exports yet, since cotton is responsible for the greater part of the seasonal movement of the trade balance, a comparison of changes in the money situation seasonally with the trade balance is tantamount to a comparison with the seasonal movement of cotton exports. The exact significance of this will become clear as we proceed to examine the data at our disposal.

The following table shows, for the years 1931–1934, cotton exports (annual value), total money circulation (monthly average of the Note

Issue plus the Token money circulation), total exports (annual value), and the annual balance of trade :—

Year	Cotton	Circulation	(a)	Total Exports	Bal. of Trade	
						L.E.
1931... ...	19·69	25·5	70·5	27·94	—3·45	000·000's.
1932... ...	17·87	24·9	66·3	26·98	—0·44	
1933... ...	21·38	24·6	74·0	28·84	2·08	
1934... ...	24·79	25·7	80·0	31·05	1·76	

(*a*) Cotton as percentage of total exports.

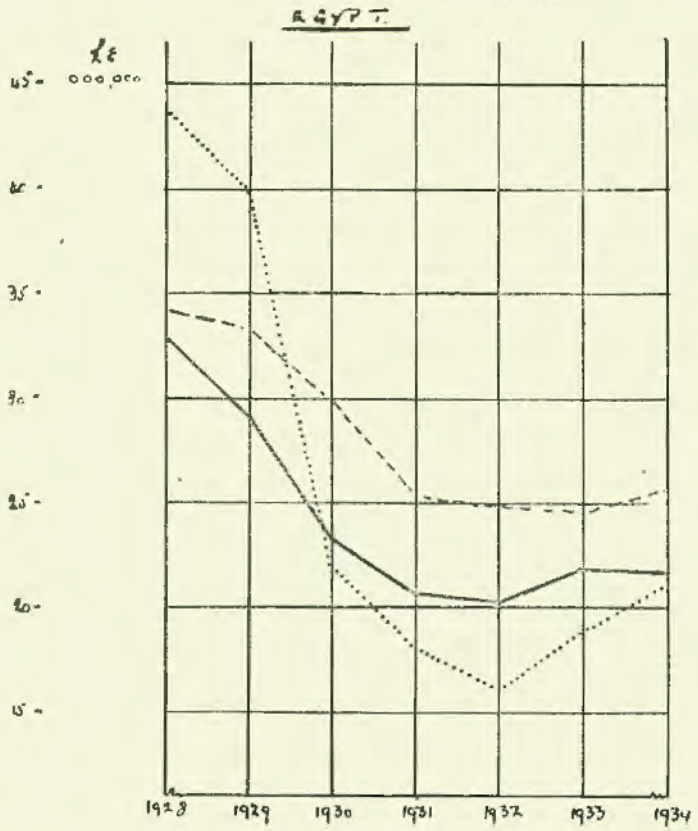
Clearly the correlation between the cotton figures and the circulation is not very close (it will be shown later that the seasonal movement is much more comparable). The absolute level of the note circulation depends on more complicated factors—the general financial situation of the country, bank policy and so on—and so we find that the note circulation, dependent as it is on the whole economic structure of the country, is much more stable than the values of cotton exports. (1). Whereas the minimum value for cotton exports occurred in 1932, the lowest average note issue was in 1933, which seems to indicate that the general economic condition of the country followed the state of the cotton trade with an appreciable time-lag between (2).

The range of the deviation of the monthly total circulation from the trend (12 months moving average) gives us some measure of the seasonal expansion and contraction of the circulation, and although we may expect cotton exports to influence such deviations, yet the fact that cotton forms a varying percentage of the total exports of Egypt leads us to believe that the range of deviation of the circulation will not show an accurate correlation with cotton exports. Accordingly the range of deviation (calculated by adding the highest deviation above

(1) It will be be shown on page 178 that cotton prices have varied much more than the general wholesale index.

(2) It must not be overlooked that we are comparing calendar years, whereas the trade year is really the cotton year, August to July.

GRAPH No. 1


EGYPT
£E
000,000
45
40
35
30
25
20
15
1928
1929
1930
1931
1932
1933
1934
TOTAL VALUE OF EXPORTS OF STAPLE, EGYPTIAN AND FOREIGN
ANNUAL AVERAGE OF TOTAL MONTHLY CIRCULATION [NOTES ISSUED PLUS TOKEN AND FIDUCIARY COIN IN CIRCULATION]
N.B.1 MORE GRADUAL MOVEMENT OF MONEY CIRCULATION INDICATES HOW MONETARY SYSTEM WITHSTOOD EXTREME FALL IN VALUE OF STAPLE EXPORTS
MONTHLY AVERAGE OF NOTE ISSUE OF NATIONAL BANK IN CROP MOVING PERIOD [OCT–DEC]
N.B.2 THIS EMPHASISES REMARK ABOVE (N.B.1.)

to the lowest deviation below in any given year) from the trend has been found to be as follows:

1930... ...	L.E. 5·3	millions.
1931... ...	2·6	
1932... ...	3·0	
1933... ...	4·5	(Average range 1928–1934 L.E. 5·9 m.)

That is to say, a minimum value occurs in 1931 when restriction of credit took place following on the troubles of Central Europe; whilst raw cotton exports were at their minimum in the next year. Moreover the value of the cotton exports expressed as a percentage of total exports was:

1931 70·5 per cent, 1932 66·3 per cent, 1933 74·0 per cent, and with such figures in front of us we should not expect monetary circulation, or the range of deviations thereof, to correspond too closely to cotton exports: the monetary circulation, being dependent on the general credit structure, will be related rather to trade balance than to cotton exports alone—at least so far as the seasonal movement is concerned.

It may be argued that if, in those yeares which show a large deficit in the visible balance of trade a correspondingly large variation in the note circulation is to be expected, then in 1930, when the adverse trade balance was over L.E. 15·5 millions, since the trade is seasonal, the variation of note issue in that year should have been unprecedented. This contention cannot be maintained, for reference to graph no. 4 will show that the adverse trade balance of that year was vastly magnified by an unheard—of import of goods in January and February in order to forestall the tariff alterations that were expected: moreover graph no. 7 shows that the circulation was scarcely affected by such abnormal imports. In order to avoid drawing false conclusions from such ephemeral phenomena, the last part of this argument will be based on average and seasonal figures rather than the absolute statistical data.

Graph No. 1. affords an easy means of comparison between note circulation and cotton exports; the average monthly National Bank circulation in the crop-moving season (October-December), it will be observed, does not differ greatly from the average, throughout the year, of the total money circulation—in any case changes in the one are reflected almost equally in the other. Then the total value of cotton exports, it will be noticed, follows the same direction, but the movements are of much greater amplitude: no doubt if the cotton

figures were plotted on a reduced scale they would correspond much more accurately, but this is merely another way of saying that although cotton influences the monetary circulation to a high degree, yet there are other steadying influences which act on the monetary structure.

At this stage it may be as well to lay down three of the conclusions at which we have arrived:

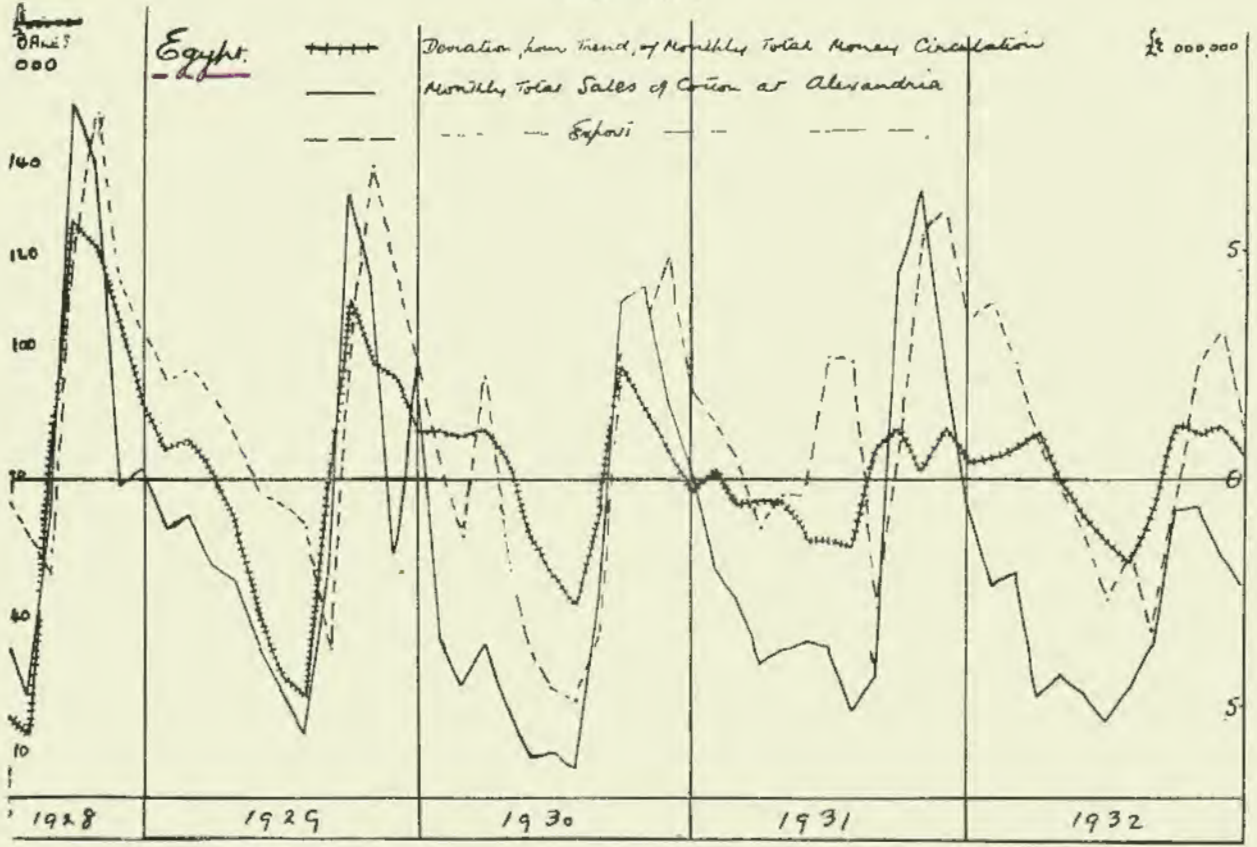
Firstly, the seasonal movement of the note issue is correlated, we have argued, with the seasonal movement of cotton, and hence with the seasonal movement of the trade balance, on the average. This we have argued from *a priori* reasoning, and we have so far shown statistically that a good correlation of the *absolute* figures is not obtainable, whilst we shall show later, by more empirical argument, that the seasonal movements are susceptible to treatment which will demonstrate a close correlation.

Secondly, as in the case of 1930 for instance, we have seen how dangerous it is to argue from isolated instances.

Thirdly, it has been argued that the general level of the note circulation depends on the whole economic situation, and although for instance cotton prices improved in 1933 (as also did the value of cotton exports) the note circulation rose much more slowly (*see* graph No. 1), which leads us to believe that a general financial improvement follows on, and perhaps results from, better cotton prices and higher value of cotton exports. The absolute level of the note circulation, by the very reason of this friction in the economic machine, cannot be expected to have the same direct relationship with the cotton crop as has the seasonal movement of the circulation.

Total exports and total cotton exports, then, move in the same direction, though naturally they do not bear the same proportions to one another. Also the average note circulation does not follow exactly either the export figures or the trade balance figures. In view of this, our statement when dealing with the general nature of the Egyptian monetary system, that the circulation is a primitive one (which would under perfect conditions adjust itself at once to changes in the trade balance) calls for some comment, inasmuch as, were the system so simple as to result in exact correspondence between note circulation and trade balance we should have the only extant example of the Quantity Theory in its simplest form working in full blast. We may now best approach the matter by asking how the adverse trade balance of 1930 was adjusted.

GRAPH No. 2


Egypt.
Deviation from Trend of Monthly Total Money Circulation
Monthly Total Sales of Cotton at Alexandria
Exports
£E 000,000
Bales 000
140
120
100
80
60
40
1928
1929
1930
1931
1932

The superficial explanations which offer themselves suggest that, even without going into such complications as invisible imports and exports, the operation of the various factors is not by any means so simple as primitive conditions might lead us to suppose. Firstly, the lower price level in Egypt offered less inducement to foreigners to send goods to Egypt ; also the tariff of 1930 which caused the huge inflow of goods before it was put into operation effectively reduced imports there-after. Secondly, until cotton prices and exports improved, the note circulation could not improve and neither could imports. Thirdly, after the value of cotton exports did increase, and after the initial improvement in the trade balance (which ended in 1933), the price level rose, imports rose, general financial conditions improved, and total money circulation increased. As we hope to show in the latter part of this essay, such explanations are merely records of fact, and do not go to the root of the matter.

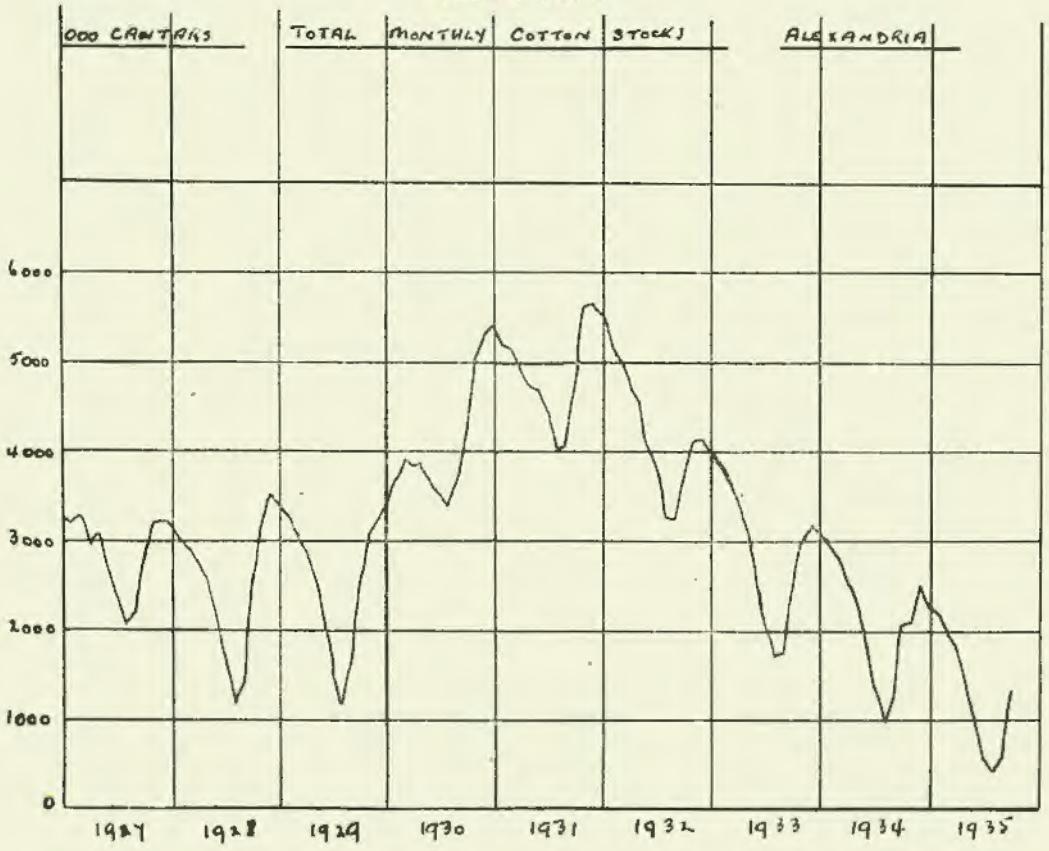
The next topics for discussion are the relations between sales, exports and stocks of cotton at Alexandria, and the deviations of the monthly figures of total money circulation from trend, and for this purpose reference to graphs Nos. 2 and 3 its necessary. It must be emphasized that in this paragraph it is not our intention to relate seasonal movements in the circulation with the value of cotton exports or with the trade balance—the exact relationship of these will be discussed later ; but here it is proposed to show the sequence of sales and exports (hence the physical volume of these quantities has been taken, not value) and then the movements of the note circulation above and below trend will indicate, when compared with cotton sales, the time relationship between cotton financing and the final movement of the crop. In the curve for the deviations of the total money circulation (National Bank issues plus token money circulation) there is a very definite seasonal movement, getting smaller and smaller until 1931, after which date it begins to grow again—this is a fairly obvious example of the swing of the trade-cycle pendulum, though it must not necesarily be inferred that 1931 was the year of greatest depression—rather should we argue that contraction of credit was greatest in that year.

The size of the deviation from trend, then, obviously has some connection, through the general price structure, with the price of cotton. For example, in 1929 the price index of Sakel was about 150 on average, whilst in 1933 it was about 70, a reduction in the ratio of 20 to 9, roughly. The total range of deviation of the circulation

in 1929 was about 9 millions falling to about 4·5 millions in 1933. The nearness of this ratio to the preceding is fairly good evidence of a close relationship between the seasonal movement of the money issues and the financing of the cotton crop ; but the close correspondence is to some extent deceptive, for we have taken only Sakel prices, and moreover the comparison is a rough approximation only, so that we cannot admit an exact correlation between the two sets of figures, which are, indeed, merely indicative of changes of the same order of magnitude. This being borne in mind, the reasoning may be put as follows : Cotton is financed *before* export, by the usual advances to merchants who send the cotton to Alexandria for sale ; once exported the cotton is actually financed through the portfolios of the banks, not through note issues. Therefore we expect to see that sales of cotton at Minet El Bassal precede exports, and a glance at graph No. 2 shows, in the case of every season surveyed, that the cotton sales peaks during the rush period, precede the peaks of exports, the latter sometimes exceeding the sales owing to direct up-country buying and the like. The month or so of lag between sales and exports is accounted for by the time necessary for mixing, pressing and export, and also by the fact that exporters keeps stocks of cotton and supply spinners, demands therefrom.

Also, on the basis of the foregoing arguments, we should expect to find cotton sales rather than exports reflected in the deviations of the money circulation ; reference to the graph No. 2 shows a most distinct correlation between sales and the deviations of the circulation, so much so that, except in the case of 1931–1932, the peaks of these two occur in the same month, which indicates that there is no great time-lag during the height of the season. In 1931 onwards, exports during the out-of-season months, and even in the season of 1932, exceed sales ; this as we have just pointed out, is probably due partly to direct sales in the Interior—but part of it must also he due to the disposal of Government stocks of cotton by private treaty etc. This heing so, and in view also of the deepening financial depression, it is to be expected that bank financing of sales of cotton will be somewhat less than before, with the result that the deviations of the money circulation should grow smaller in proportion to the cotton exports. The graph bears witness to this change. In the peak month of sales in 1931 we find no corresponding peak for the circulation ; in fact the reverse. It must be presumed, therefore, that the banking system

GRAPH No. 3


000 CANTARS
TOTAL MONTHLY COTTON STOCKS
ALEXANDRIA
6000
5000
4000
3000
2000
1000
0
1927
1928
1929
1930
1931
1932
1933
1934
1935

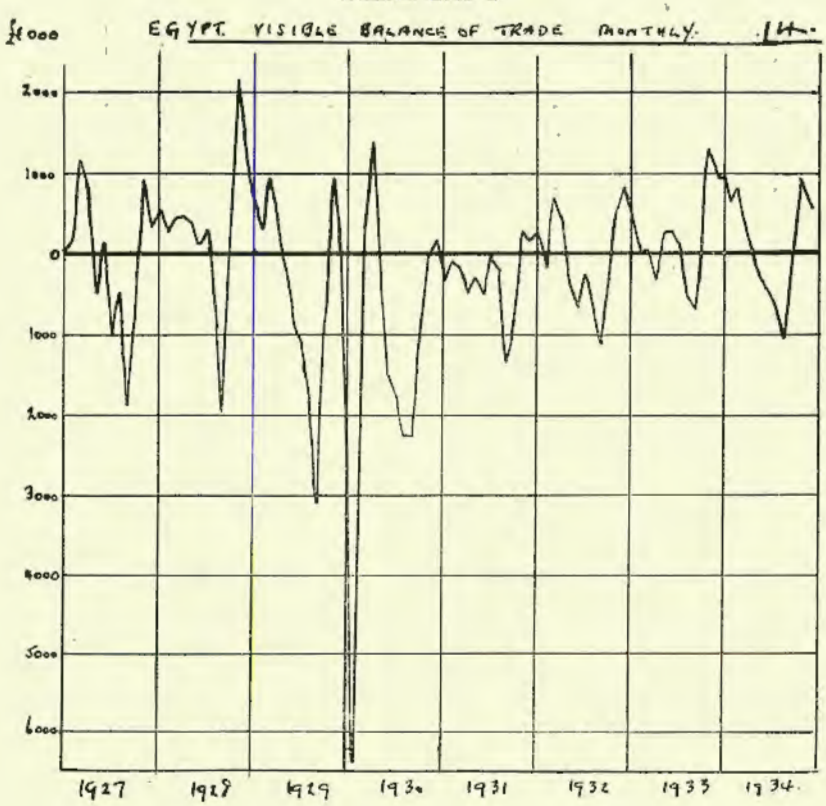
either actively or passively, was restricting credit after the debacle of September 1931, and that sales and exports were financed more by private credit. (Bank Rate in England was 6 per cent). Unfortunately we cannot test the accuracy of this, since foreign banks do not publish balance sheets for Egyptian business only, whilst the National Bank on the other hand seems to have acted as a true central bank at this juncture, for although its Advances on Goods figures show a somewhat lower peak than usual in October—December 1931, yet the peak is quite pronounced. We are thus left with the conclusion that since the crisis was abroad rather than in Egypt at this time, foreign money was withdrawn by the commercial banks for use in the stricken markets of Europe and London, leaving the cotton crop to be financed from other quarters. It is also noticeable that (*see* graph No. 7) the leap of the trade balance from low in September 1931 to high in October was the smallest for the whole period 1928–1934; and as we shall see later, the correspondence of the trade balance with the seasonal movement of the circulation may be sufficient to explain the low figure of the circulation in the month of November.

Graph No. 3, indicates the movement of stocks in Alexandria, and the peak for the period 1927–1935 is clearly to seen—season 1931–1932. Moreover the end of 1931 saw the highest stocks of all, and this corresponded roughly with the period of lowest prices (it is true there was a slight spurt in prices in the last few months of the year, but the statement remains true that the season 1931–1932 saw the lowes point of the trend of cotton prices—refer graph No. 11). Stocks, then, indicate in a most distinct way the general movement of business activity (and of the business cycle) and no better evidence of depression either present or imminent can be offered than this peak of stocks in 1931–1932. It is difficult to say just how far this was the *result* of the government cotton policy. At the end of 1931 government stocks themselves were over 2·5 million cantars, and the government was selling something like three-quarters of a million cantars per season, so that we cannot say whether, had the government abstained from buying cotton, the stocks would have been appreciably lower. In any case, it is quite possible that 1931–1932 would still have been the year of highest stocks, for the government policy had its effect on the seasons 1930–1931 and 1932–1933, besides the season we are considering. Looking at the question from the beginning of 1930 only, it seems as if government buying occurred just at that time

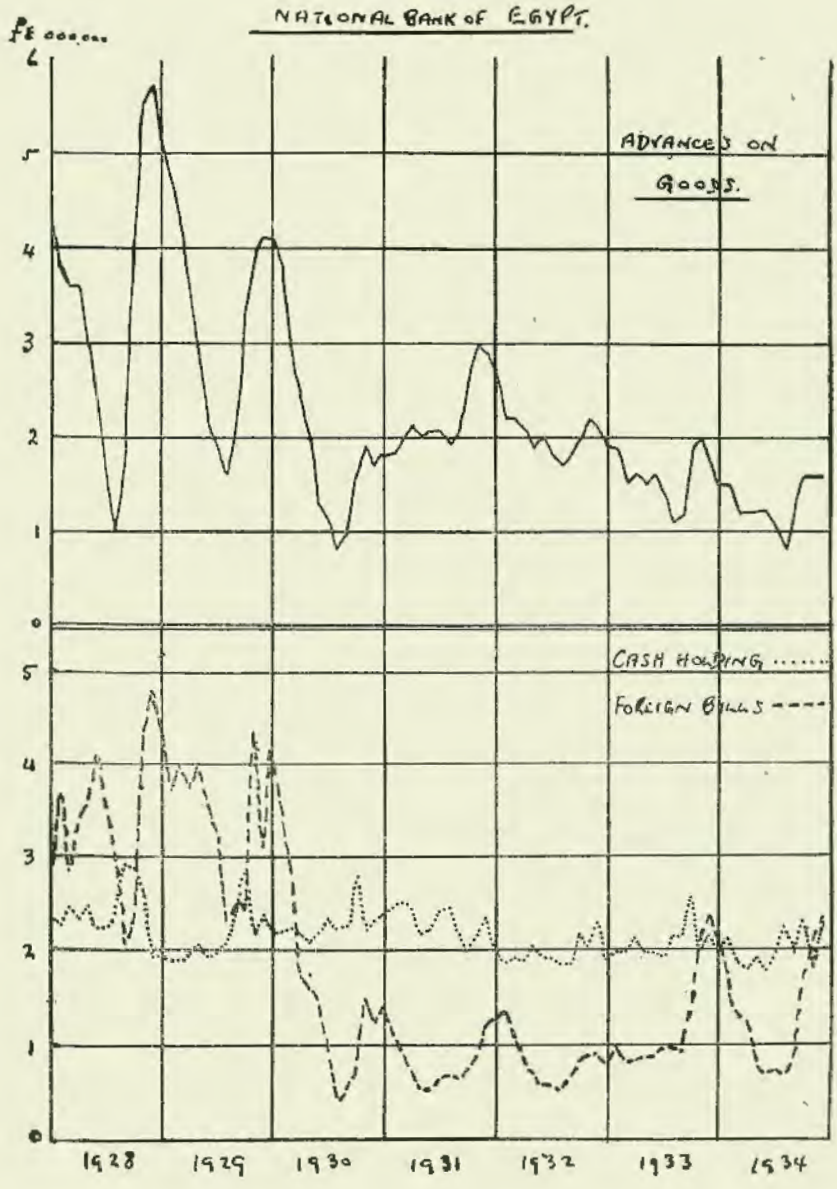
when stocks failed to make their customary downward movement, whilst the government influence had almost disappeared in season 1933–1934 at the time when the stocks curve resumed its normal appearance ; reasoning on these lines would lead us to ascribe to the government policy the whole of the rise in stock holdings over the period 1930–1933, but since the years 1933–1935 show progressively decreasing stocks as trade improves, it would be dangerous to account in that way for the whole of the rise in stocks in the years mentioned. At best we may offer both government policy and commercial depression as reasons.

Before leaving the subject of cotton sales, it is interesting to recall the view held by Mr. Hawtrey and others concerning the effect of a rise in Bank Rate,—of course, this view and the many others can concern only countries where there is an advanced system of credit : but as Egypt's *source* of short-term credit is a highly organized one (London) and as the importance of cotton to Egypt makes observation simpler than in more developed countries, we may risk one attempt to apply modern theory to an ancient country. Hawtrey holds the opinion that a rise in bank rate causing a rise in the cost of borrowing money impels the merchant who is holding stocks of goods to sell off more rapidly than usual. The cost of holding goods increases with the cost of borrowing money : hence sales of goods and a fall in the wholesale price-level. In Egypt, we may apply this theory at the most obvious spot, *viz.*, the end of 1931. In September, 1931, England abandoned gold, and the Bank Rate rose to 6 per cent. In graph No. 2 it is discernible that although monetary circulation rose as usual up to September, in October it failed to rise as in previous years. Contraction of credit in London had had its effect even in Egypt. But when we look at cotton sales, we find the upward leap of October-November is every bit as big as that of the previous year. In other words, although monetary circulation was not much increased (it fell in November) the high price of credit caused a quick selling off of cotton so as to liquidate positions. Against this it may be argued that just at this time prices of cotton rose, and that therefore the selling of cotton would in any case have been prompted by the rise in price. But it must not be forgotten that the rise in price of cotton was largely due to the sudden depreciation of sterling against the dollar, and that were the sales of that particular season's crop *normally* influenced by a rising price level then the monetary circulation would

GRAPH No. 4


£1000
EGYPT. VISIBLE BALANCE OF TRADE MONTHLY.
14.
2000
1000
0
1000
2000
3000
4000
5000
6000
1927
1928
1929
1930
1931
1932
1933
1934

GRAPH No. 5


NATIONAL BANK OF EGYPT.
£E 000,000
6
5
4
3
2
1
0
ADVANCES ON GOODS.
CASH HOLDING .....
FOREIGN BILLS ----
5
4
3
2
1
0
1928
1929
1930
1931
1932
1933
1934

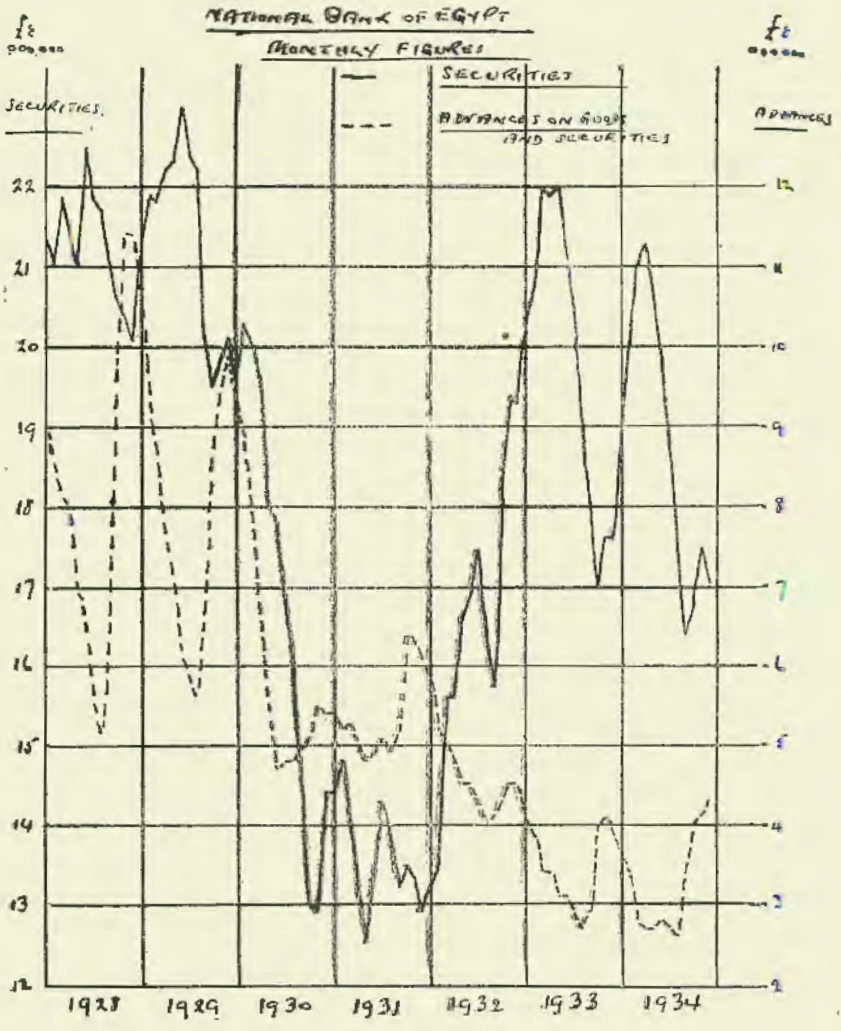
probably have increased rather than decreased. And so we are brought back to the theory, of which Mr. Hawtrey is so distinguished a proponent, that is to say, that a rise in the cost of credit probably caused or helped to cause a rise in the volume of cotton sales what time the monetary circulation was actually being reduced.

The National Bank of Egypt, as was mentioned in the introductory paragraph of this essay, has a dual nature. It is a Bank of Issue, and a commercial bank. An attempt will be made, therefore, to see how far the duties devolving upon a bank in these two different spheres of operation have overlapped. Graph No. 5 shows the Advances on Goods, Foreign Bills, and Cash Holding of the Bank from 1928 to 1934, the figures being given monthly. The first point to notice is that in the troublous times of September to December 1931, the Bank acted, so far as we can see, as a true Central Bank; even though credit was expensive in London, the Bank's Advances on Goods figure rose rapidly between September and November by quite as much as in 1930, thus indicating that in the face of tighter credit conditions, the National Bank was doing its best to finance the Export of Cotton and so stave off a wholesale collapse. The peaks of the cash holding towards the end of every year precede the peaks of Foreign Bills by about one month, showing that the Bank gets its Cash position in order before the Foreign Bills come forward for discount, and before money is required for the last stages of financing the movement of cotton in the Interior (for Cash is high in October and falls rapidly away in November, which is usually the month of greatest movement in Alexandria). The most likely supposition is that at this point the two curves under consideration are actually representing the technical process of discounting bills in Egypt; those exporters who discount their cotton bills with the National Bank have in many cases previously obtained an advance against the cotton whilst it is being prepared for shipment; and it is this advance, used to pay for the cotton either up-country or in Alexandria, which results in the gradual withdrawal of Cash, just before the shipper is able to hand his documentary bill to the Bank for discount. In December 1929, for instance, when Foreign Bills dipped so suddenly, cash expanded slightly in the same month; it is not possible to divine the domestic policy of the Bank in these matters, but the Foreign Bills may have been sold in London to provide foreign exchange for banks who wished to remit funds to London,or they may have been disposed of to make the Bank's position

more liquid, and to reduce the overdraft in London : either of these is feasible. Advances went to their lowest point in 1930, but from then to the peak in 1931 there is a big rise : thereafter allowing for the seasonal movement, the trend is downwards. Foreign Bills, on the other hand, although they were at their lowest in 1930, showed a big seasonal increase in 1933 and 1934, thus making the trend upwards. It seems, if we link this upward and downward movement together, that the Bank tends to concentrate now on financing exporters of cotton rather than upcountry merchants. Indeed this is the impression in some quarters of the market at present (1935–1936), and it is reinforced by the knowledge that between 1930 and 1935 the *trend* of the figures of cotton arrivals at Alexandria for the Bank was downwards. There are two other significant points to mention : firstly it is remarkable that during the early part of 1931 the usual decrease in Advances on Goods did not materialize ; this may be a purely fortuitous occurrence, but it seems much more likely that as funds became engaged in Europe, merchants and exporters who had exported cotton were unable to obtain payment, so that the Bank, for fear of precipitating a panic must needs have left advances outstanding. Or, another way of looking at it, at the end of 1930 the Bank did not let Advances on Goods climb as high as usual (compare 1928 and 1929) so that the state of affairs in the early part of 1931 would be the same as if more advances had been given in 1930, and had been repaid a month or so later : if this were so, and we could draw in a peak of Advances at the end of 1930 at say L.E. 3·5 millions, we should find that the trend from 1928 to 1934 is consistently downwards. Which of these two explanations (if either) is correct we cannot, without further knowledge, decide; it is a question of choosing between an explanation which favours an early restriction of credit (in 1930) or, somewhat later, an expansion of credit in the form of passively allowing advances to continue in 1931.

The last point concerns the Cash Holding. In summer, Cash is almost invariably low, the only noteworthy exception being in the middle of 1931, when an unusual rise occurs. This appears on the face of it to be an effort to attain a more liquid position so as to be ready for any eventualities. Unfortunately we cannot adduce any evidence to support this—for in the first place the Securities figure also rose in June and July, whilst the rise in the Cash holding is so small actually as to be almost insignificant in the mass of the other

Graph No. 6


National Bank of Egypt
Monthly Figures
£E
Securities
Securities
Advances on Goods and Securities
Advances
22
21
20
19
18
17
16
15
14
13
12
1928
1929
1930
1931
1932
1933
1934

accounts of the Bank. If, however, the Bank looks to its Cash Ratio as do some of the English Joint Stocks Banks (1) this trifling rise in Cash (say L.E. 200,000) may represent a potential L.E. 2,000,000. of loans, in which case it is very significant in a total balance sheet of less than L.E. 30 millions Thus we must be prepared to admit that the rise in the Cash holding was indeed a sign of the times, that it was possibly pre-arranged so as to be ready for emergency use—but we cannot disentangle this change from the numerous changes in far bigger accounts at that time ; the idea must therefore be left as a supposition, by no means proven.

An interesting study is afforded by comparing the movements of State Securities and Advances on Goods and Securities in the National Bank balance sheet, for such accounts represent the two most important of the revenue-earning assets of the Bank. Graph No. 6 shows the monthly movement of these figures. Advances on Goods and Securities do not comprise the whole of the advances of the Bank, but as we cannot know the nature of the other advances, the figures given here are assumed to give at least an index of the Bank's lending to the local market. Up to the end of 1929 there is a clear inverse correlation between Securities and Advances ; the Bank tends to dispose of securites and to lend more on goods and securities during the crop-moving season—and of course this movement is reversed after the crop is moved. Thus, as we should expect, the Bank was at that time moving out of securities into advances, and vice versa, just as market conditions required. But after 1929, both Securities and Advances fell abruptly, the fall in Advances preceding that in Securities ; then at the end of 1930 again, the seasonal rise in Advances occurred, whilst Securities dropped even further (*i.e.* the *seasonal* inverse correlation continued during crop-moving). Thereafter the seasonal movements in opposite directions directions continued, for the most part, and also a new development took place as from the beginning of 1932, for the *trend* of Advances and of Securities moved in opposite directions, in addition to the seasonal opposite movements, so that as Advances diminished, Securities tended to replace them as profit-earning assets. (This is a thesis which lends weight to the idea advanced when we discussed the Advances on Goods and the Foreign Bill Holding

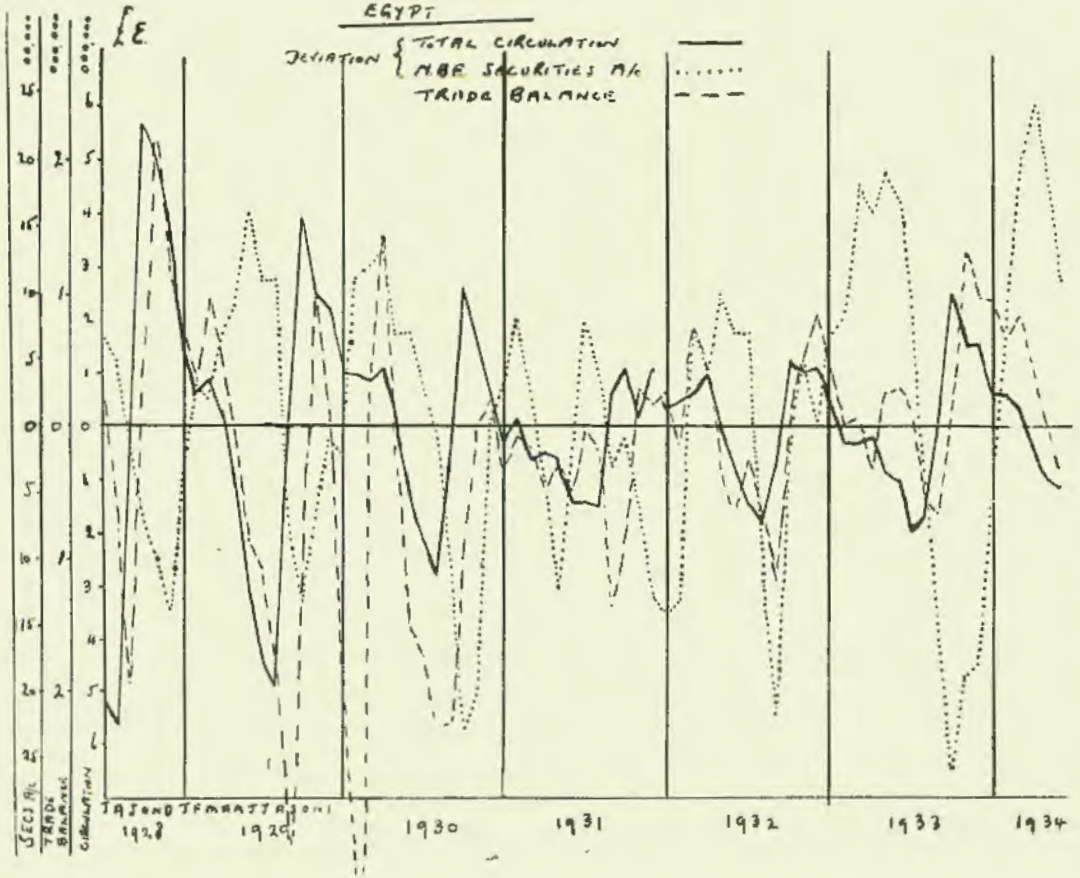
(1) The Manager has intimated to the writer that this is, in fact, the case.

—*i.e.* that the Bank tends to lend less and less on the upcountry movement of cotton (1). It seems, then, that wholesale "retrenchment", that is, a rapid decrease in Securities *and* Advances, took place only from the end of 1929 to the middle of 1930, and apart from a preliminary wavering in 1931 they took a definite course thereafter. The movement downwards in the case of Securities *may* indicate the fall in the value of the portfolio owing to lower security prices (which is extremely unlikely, since in 1930 the Bank did not draw on the Reserve to meet any such loss : such a course was adopted in 1931)—or it may represent a deflationary movement on the part of the Bank, a hypothesis which is rendered more tenable since the monetary circulation showed an almost corresponding fall down to August 1930 (*see* graph No. 8), a drop which is not entirely accounted for by seasonal contraction. The upward movement in Securities from the end of 1931 onwards bears witness to a phenomenon to be observed almost everywhere in the financial world at the time : for instance, in England, the Clearing Banks total average weekly holding of securities was in June 1930, 248 million pounds, and in December 1934, 594 millions. The rise in the National Bank of Egypt's securities over the period is not comparable exactly (from under L.E. 13 millions November 1930 to just over L.E. 17 millions at the end of 1934), but it must not be overlooked that there is a wide seasonal movement in the Egyptian figures and that the highest points reached were between 21 and 22 millions. Part of the rise may probably be accounted for, as in England, by a rise in the price of the securities, (2), but there seems little doubt that Egypt's National Bank has adopted the policy common elsewhere, of reducing the credit (*i.e.* the Advances) and transferring the purchasing power elsewhere by buying up State Securities. It seems from the last sentence as if the Bank were actively restricting *business* credit, but that is not necessarily so, for Bank Rate in England has been 2 per cent since June 1932 and, as short term rates in Egypt are based on the cost of borrowing in England, there is no doubt that, for the "safe" borrower, terms of advances were very easy ; so that it is much more likely to suppose that the National Bank in Egypt was not able to find a safe outlet for funds

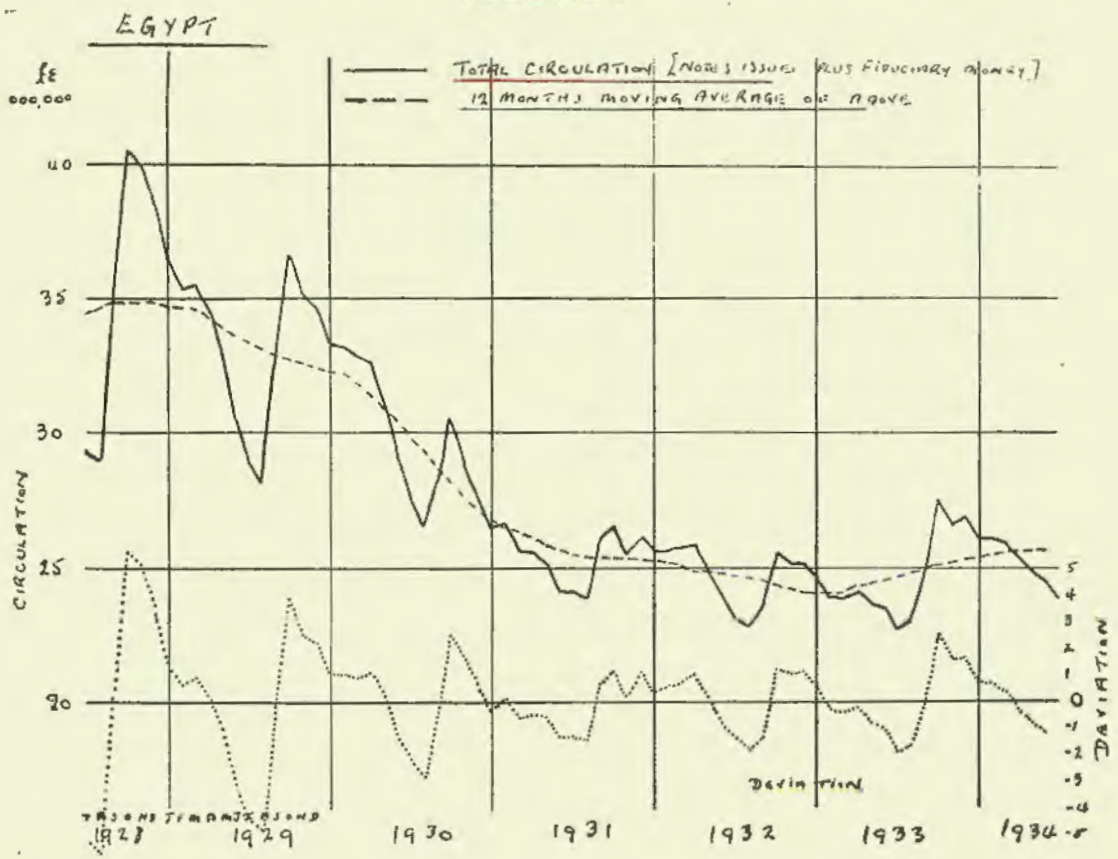
(1) This is subject to the qualification that we do not know what proportion of advances is against cotton : cotton financing may be even increasing, of course.

(2) Consols Dec. 1931—53.1. Dec. 1934—90.5
Unified Dec. 1931—minimum 79.56. Dec. 1934—highest 108.

GRAPH No. 7


EGYPT
£E
DEVIATION
TOTAL CIRCULATION
N.B.E. SECURITIES A/c
TRADE BALANCE
SECURITIES
TRADE BALANCE
CIRCULATION
J A J O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1928
1929
1930
1931
1932
1933
1934

Graph No. 8


EGYPT
£E
000,000
TOTAL CIRCULATION [NOTES ISSUED PLUS FIDUCIARY MONEY]
12 MONTHS MOVING AVERAGE OF ABOVE
40
35
30
25
20
CIRCULATION
DEVIATION
5
4
3
2
1
0
-1
-2
-3
-4
1928
1929
1930
1931
1932
1933
1934

in the years 1932–1935, and was therefore forced to take up securities (this may be termed deflationary only in so far as the deposits created thereby are probably less mobile than advances for business purposes). The discussion now leads, clearly, to the consideration of the relationship between the Securities account and the Note circulation (or, as it given here, the Total Money Circulation), and further comments on the Securities Curve will appear in that context.

Graphs Nos. 4, 7, and 8 have been drawn so as to show as clearly as possible the Deviation from Trend of the monthly figures of the Total Money Circulation (National Bank Issues plus Token Coinage), of the Securities Account of the Bank, and also of the absolute figures of the Visible Trade Balance. It is particularly noticeable that there is a dip in the Securities Deviation in May 1931 : this by itself might mean little, but in the succeeding two months there is an unusual peak, the second in that year, whilst the usual dip occurring round about October does not occur until December and January. Now this sudden rise in June and July has of course altered the Trend, and had it not occurred the trend would have been lower, and the fall in the early part of 1931 would have represented the normal seasonal movement : thus we may look upon the June and July rise as abnormal, and not the May fall—and the rise itself may be explained by the advent of the May crisis in Europe and the consequent desire of the National Bank either to buy liquid securities or to assist the market over a difficult time ; the late fall in Securities account in December may be attributed to a delay set up in the financial machinery causing the actual course of events to lag behind the normal. Some of this argument, as we indicated earlier, is stultified by the fact that we do not know exactly what changes are due merely to rises or falls in the valuation of the securities portfolio due to price changes, but the main lines of the discussion appear to fit the events. The next important point to observe is the clear inverse correlation between the Securities Deviation and the Money Circulation Curves (1) : such a correlation shows, to some extent, the directness of the effect of what may be termed "open market policy," though such action may be active

(1) It will be seen later that the co-efficient of correlation between the average seasonal movements of Securities and Advances is —0.97 (inverse), of Money Circulation and Advances +0.88, Hence we should expect to fined a close *inverse* correlation between the Deviations of Securities and Money Circulation.

or passive in a sense, and in any case can be only a shadow of similar policies in the more advanced financial centres. Taking the broad view of these two Deviations, it is surprising to see how "theory works out in practice" with such astonishing regularity; if we omit the difficult and complicated period from May 1931 to about June 1932, we see that year after year, as the Securities figure increases the Money Circulation falls; that is, as money used for the crop moving is returned from circulation, the Bank buys up Securities—and moreover, by referring to the scales at the left of graph No. 7 we may see that the slack taken up by the Bank's purchases of securities is, as we should expect, only a proportionate part of the circulation in the earlier years, and a far larger proportion in the later years (since the Securities portfolio grew in greater proportion than the Money Circulation after 1932). These figures illustrate so well the normally expected course of events in a country where the Quantity Theory, in its simplest form, seems to find its realisation in practice, that we are almost impelled to be suspicious; fortunately there are other data and methods of treatment which corroborate the view just put forward, so we may perhaps accept the conclusions so far as they go. In graph No. 7 the curve for Securities registers an unusual drop in November 1931 (as just pointed out), and at the same time the Money Circulation as compared with its trend is unusually low: this apparently belies the arguments just advanced, but it must be remembered that 1931 was a most difficult year, and that the exchange difficulties following on the remarkable events of September 1931 would in themselves be sufficient to disorganize the financial machine. In addition to this, however, there is a most important point to make, for the curve of Money Circulation of August 1931 to Januaty 1932 is almost the same shape as the curve for the Trade Balance for September 1931 to February 1932: reference to graph No. 2 shows that the comparatively low money circulation was not due to diminished exports of cotton during the period; in other words, the money circulation takes the shape (seasonally) of the Trade Balance rather than of the value of exports only, yet the effect of cotton finance on the general credit structure of the country is such as to cause the movements in the circulation to *precede* the movements in the Trade Balance. This is merely an isolation of the general tendency which will be statistically summarized later when discussing the Average Deviations of these curves (*i.e.* the seasonal movement)—but it is important to establish the point

now, whilst dealing with the actual rather than the average figures, for otherwise it might be contended that the average gives a result which does not represent, necessarily, the true facts of the case in any one year. A general survey of the Securities and Trade Balance Curves shows that, in broad terms, the two are inversely correlated: moreover it is also apparent that, on the whole, the Money Circulation and the Trade Balance curves are directly correlated, the former preceding the latter, more particularly where maxima and minima are concerned, by one month. Correlating the whole three of these curves, we get really a curve picture of the method of financing imports and exports, the latter being mainly responsible for the time lags between the movements: thus the Money curve moves first, followed after a month by the Trade Balance curve, to be followed in its turn, three or four months later by the Securities (for as money returns from cotton financing, the National Bank can buy up Securities again). In general also, of course, the Foreign Bill holding of the National Bank (*see* graph No. 5) moves in the same way as the Money Circulation: now, supposing that the Bank as we mentioned before, has reduced its financing of up-country business and is concentrating more on exporters bills, we may substitute the Foreign Bill movement, in the above sequence, for the Money Circulation, thus making the Bank's internal movement:—Foreign Bills, Trade Balance (these two tending to coincide in the same months), and then, after the usual lapse to allow funds to return from bill discounting, the Securities Account; whilst the Banking System in Egypt as a whole (looking upon the National Bank for the moment as a true Central Bank) will have the following sequence of events:

1. Money Circulation. Then after a month or so
2. Foreign Bills and Trade Balance. Then after 4 months or so
3. Securities Account.

Now the Money Circulation, as we have said, is a dependent variable, for in the "season" it is a function of Advances, and we observe from graph no. 5 that the peaks of Advances on Goods precede the Foreign Bill peaks by a short period usually. This clearly puts the National Bank into line, as it were, with the rest of the banking structure, for Advances will replace Money Circulation in the above list of events, so far as the Bank's internal affairs are concerned; and

moreover, in so far as the correlation between the Advances account of the Bank and the Total Money Circulation is close, it may be said that the National Bank is still doing a *proportional* part of the financing of the commerce of Egypt. Again, to the extent that the Advances of all the commercial banks (1) and the Total Money Circulation show a close seasonal correlation, followed a short time afterwards by a closely correlated Trade Balance, such curves as these would demonstrate how the banking system, on the whole, is adjusting the monetary structure to the requirements of commerce and trade.

At this point, so as to facilitate a wider comprehension of the principles underlying the numerous movements discussed in the preceding paragraph, it is as well to recapitulate, in outline, the method by which funds are transferred to and from Egypt. It is all a question of a transfer of sterling assets to the National Bank's London Office and hence to the Bank of England on behalf of the Note Issue Department of the National Bank—assets on the basis of which currency can be issued in Egypt : thus credit expansion in Egypt is conditioned by borrowing in London, *i.e.* by a slight credit contraction in the latter market. The National Bank, in London, buys Treasury Bills with the funds offered to it, and against these Bills notes are issued in Egypt. The Banks in Egypt which work on behalf of their European Head Offices borrow from the Head Office, convert the money so obtained into sterling (if it is not already in sterling), and offer it to the National Bank, which pays out notes against sterling at par (97.5 piastres for one pound sterling)—for amounts under 100,000 pounds an exchange charge is made. It is the proceeds of these sterling funds which constitute the primary " inflation " which carries the crop to Alexandria, and foreign bill discounting does not come into the question till later. (When the exporters' bills do come forward they are discounted in Egypt, usually, and then discounted for the Egyptian branch of the bank by their Head Office in London say, so that the Egyptian branch is put into funds again. Such foreign bills constitute quite a usual form of remittance by which the banks financing exporters repay their borrowings in London). Those banks established in London which do not finance the exporter are reimbursed for their advances to merchants as the cotton is sold at Alexandria, and they then buy

(1) Unfortunately we cannot obtain figures for Advances of all banks working in Egypt. Only Egyptian companies are compelled to publish figures applicable to their business in that country.

back sterling from the National Bank and repay their loans from their Head Offices. Thus the cotton crop is financed largely by borrowings in London, and the effect in the latter market is that Treasury Bills are bought by the National Bank most probably with liquid cash that resulted from a *sale* of Treasury Bills shortly before by the bank which is lending money to its Egyptian branch (of course, this is only one of the many ways of providing ready cash in London)—in which case it is in effect merely an exchange of Treasury Bills in London; but as a sale of Treasury Bills by one bank must reduce its liquidity (the Treasury Bills being replaced by the overdraft of the branch) there is a real contraction of credit. In whatever way the money is placed by a London bank at the disposal of its branch in Egypt it will normally exercise a restrictive action on the credit structure of the London Market. Thus far in the argument, then, we have shown that bank lending to finance the primary movement of the cotton crop, say is based fundamentally on a credit inflation in Egypt dependent itself upon money rates in England. It must be remembered that we are considering the system broadly; the details, such as local financing by the Banque Misr, a powerful Egyptian concern, would only obscure the argument. In such a way, then, does Egypt provide one of the best possible examples of the world's dependence on the London market for much of the funds utilized for short-term crop movements: it is not difficult, with such concrete evidence before us, to realize the enormous strain to which London is subjected each year to finance the crops of some predominantly agricultural countries. In fact, the thesis has been advanced by Mr. J.I. Craig, the Financial Secretary in Cairo, that the gold shipments which in pre-war times characterised the crop-moving season in Egypt were a prime factor in the London credit structure, having a considerable influence on the Bank of England Rate. In passing, it may be noticed that, although of late there has been an outcry against the diminishing volume of commercial bills in London and the increasing use of the Treasury Bill by Discount Houses, the narrowing of the Treasury Bill market might mean a drying up of at least some of Egypt's prosperity, in as much as the note-backing, represented as it is, partly, by Treasuries, might be in jeopardy and so the fluidity of the present system might be detrimentally affected.

So far, in the explanation of the principle underlying the financing of cotton, Egypt's seasonal borrowing only has been discussed: but

another point arises at the same time, *viz.*, how is the balance of payments for the visible trade items effected ? What is the underlying, principle ? We mentioned a little earlier, in parenthesis, how exporters bills are discounted : these, in effect, are the means by which payment is effected. Supposing we take our stand at the point where the banking system has borrowed from London and has expanded credit and lent enough money to merchants and the like so as to get the cotton to Alexandria. At this point the exporter takes over the crop, discounts a sterling bill usually with his bank in Egypt, and uses the proceeds of that discount to pay the merchant for the cotton he has bought, or to repay the bank loan by means of which hehad already paid for the cotton. The bank now remits the bill to London and pays off its loan there. The net result is now, that Lancashire has paid Egypt for the cotton : and as compared with the circulation existing before the crop was sold, the circulation of money and credit should (if the Bank of Issue nas expanded currency exactly in accordance with trade requirements) be increased by the total value of the cotton. This is putting things in their simplest form, of course. Egypt now possesses an equivalent right to wealth, such right being redeemable in Sterling—for the note circulation is backed by sterling assets or by gold. Hence throughout the rest of the year, as the Balance of Trade moves " adversely " (a contradiction in terms, really), Egypt must use up her claims on the other contries *via* sterling and as the goods are purchased by merchants, shop-keepers, customers, notes are withdrawn from circulation and the sterling assets of the Issue Department fall. In practice, much of the import trade is financed by import credits, but the *technique* of the import, although it calls for more temporary borrowing on the London market, does not invalidate the broad theoretical principles which underly the exchange of goods and services between Egypt and other countries. It will be observed that the discussion rests always, up to now, on theassumption of short-term movements, that is to say seasonal movements, for, as was pointed out earlier, the long-term movement of Circulation over a number of years depends on an agglomeration of economic phenomena, price levels and the like, so that the national balance of payments can be effected by means of monetary structures which vary in size from year to year. Provided that there is no rigidity in the system which, for example, might prejudice the sale of the cotton crop, or which might, let us say, cause an unprecedented rise in saving

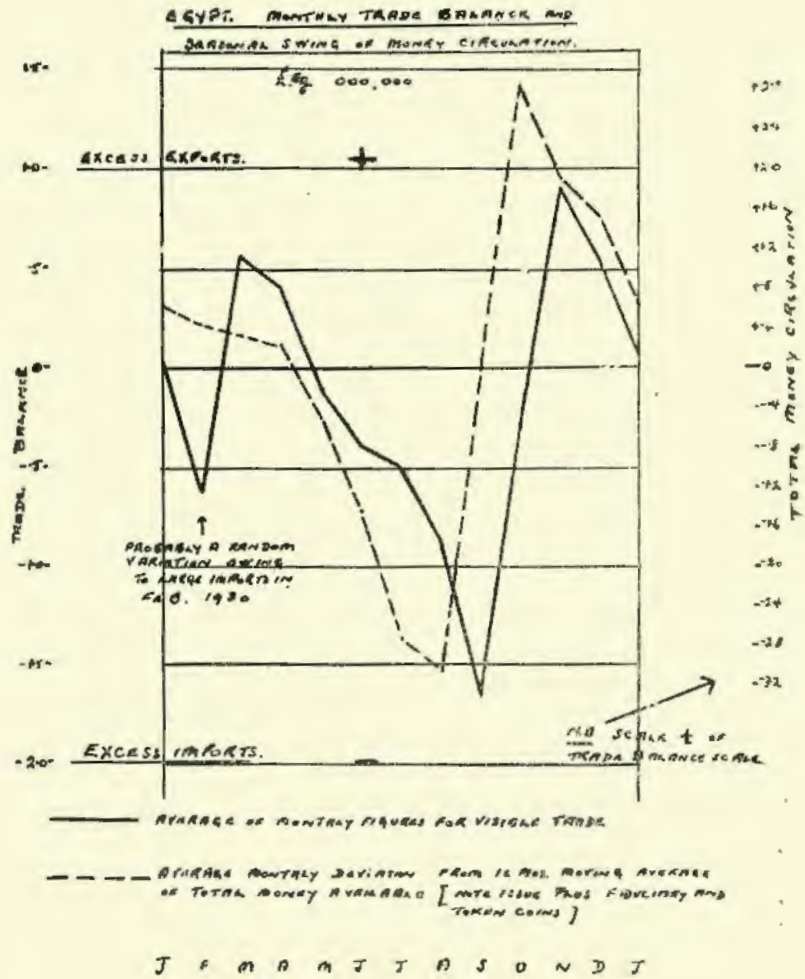
and a fall in prices so that imports fall off considerably—provided there is no fundamental occurrence of this nature, the balance of payments will usually "balance", due allowance being made for movements of capital, by the end of the current crop year, within a little (1930 was an exceptional year so far as the Balance of Visible Trade was concerned ned). Indeed, the present system of pouring funds in and out, by way of the National Bank Note Issue, ensures a perfect functioning of the international payments of Egypt. Since Egypt can borrow mainly for crops, and is dependent almost entirely on money rather than credit conditions locally, the country is a passive factor, and must perforce follow the trend of affairs abroad; particularly is Egypt at the mercy of any sudden rise or fall, speculative or not, of the price of cotton. Such price changes may affect the terms of trade; they may raise or lower the standard of living considerably in Egypt; price changes or credit policy abroad may provoke hardship for the fellah; but on the whole this delightfully simple mechanism, the Issue Department of the National Bank, cannot break down except in the very unlikely event of extraordinary losses in the sterling value of the Note Cover (*i.e.* Treasury Bills, Treasury Bonds, War Loan, Gold). The reason for the faultlessness of the machinery is clear: the Bank guarantees to provide only *Sterling* against Egyptian pounds, and keeps the notes backed by sterling assets of proved worth; moreover, although we have noticed here and there what appear to have been efforts on the part of the Bank to ease the internal situation, these efforts, if they were such, were part of the mechanism of the Banking Department, and the Note Issue policy was not changed in principle. Were there any local credit market of importance, the situation might not be so fortunate, for in that case the National Bank could not afford to be a passive factor: it is principally because the Note Issue is the paramount consideration that the system works so well, on almost model lines. If we suppose, however, that all individuals wish to sell their Egyptian Pounds and invest their money in London, we find a possible flaw in the machinery: 50 per cent of the liabilities of the Banking Department of the Bank are in current and other accounts and the Bank is bound to supply sterling on demand against all such, liabilities (*i.e.* the Bank must supply notes on demand against sight accounts and the notes give the holder the right to sterling). In such a case the Bank would not have enough sterling assets in the Banking Department in all probability, and the position would seem unsound

But a general demand for sterling, when the Egyptian pound is so closely linked to that currency, is extremely unlikely, and in such an eventuality it would merely reflect the vulnerability of the banking system (or of any similar system), not the mechanism of Note Issue, for the latter would still be backed 100 per cent by assets the majority of which would be convertible into sterling, save for a calamity on the London Stock Exchange and Bill Market.

What is the case when importers, having been granted enormous import credits by misguided bankers, flood the market with imports? The price level tends to fall if there has been no particularly large export of cotton to counteract it, and merchants cannot obtain payment for their merchandise ; thus banks are left with credits mildly frozen. (We are presuming no change in the movement of capital). The Balance of Trade may have been very " adverse " as in 1930, yet, unless the price-level has proved particularly rigid and the consumers highly desirous of buying goods out of their savings, the banks will find something owing to them ; these debts must be looked upon as a *loan* to the country, in fact in some ways an import of capital into Egypt, and they cannot be repaid until next season, say, when the cotton crop is exported. All the time, though, if we regard such inability to pay as a temporary loan to the country, the balance of payments at any given moment must inevitably " balance ". We cannot here go into the items which are included in the Balance of Payments of Egypt, but we have analysed to some extent both the theory and practice of the machinery which accounts for the main inward and outward flow of funds ; it now remains to analyse more thoroughly, by statistical treatment, the seasonal movements of trade, note circulation, and various other financial pointers.

Graph No. 9 shows the monthly average, taken over the period 1927 to 1934, of the Trade Balance, and also the monthly average, taken over the period 1928 to 1934, of the Deviations of the Total Money Circulation from Trend : that is, the curves represent what is usually taken by statisticians to be the seasonal movement. Unfortunately the representation is not exact, for, given a series of figures in which the average for the first year is L.E. 34 millions and that for the sixth year is only L.E. 24 millions, the same seasonal movement, calculated by averaging the deviations as above, cannot possibly apply to both. But since the same remark applies, in this case, to the averaging of the Trade Balance, we may take the curves shown to be a good means

Graph No. 9

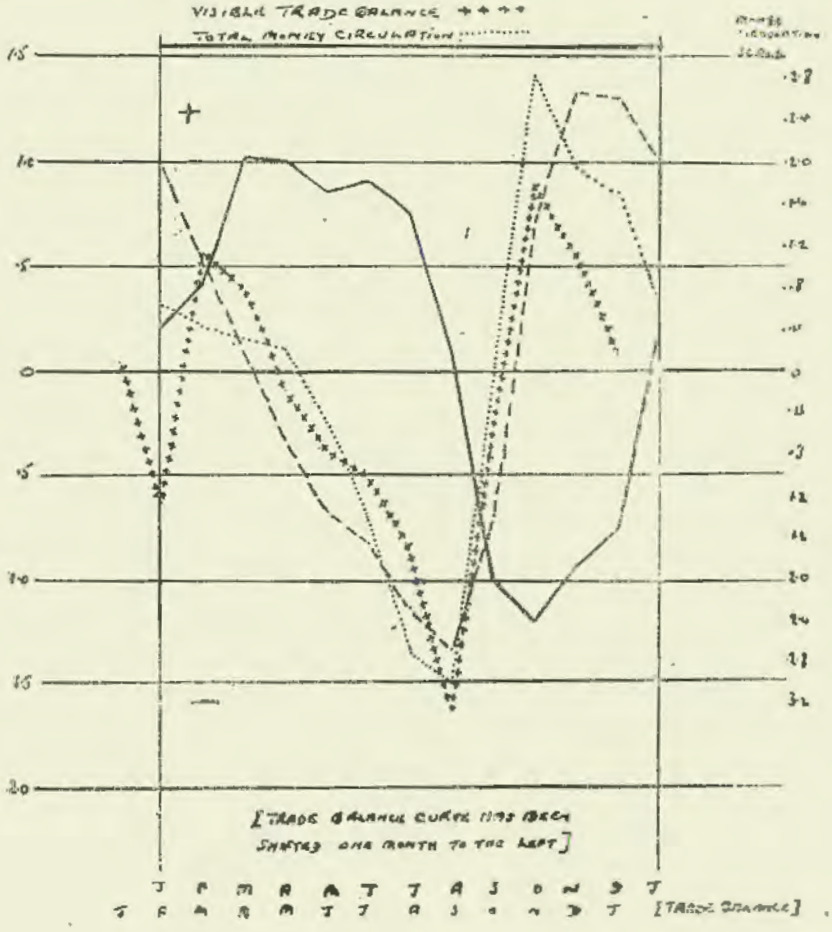

EGYPT. MONTHLY TRADE BALANCE AND
SEASONAL SWING OF MONEY CIRCULATION.
£Eg 000,000
EXCESS EXPORTS.
EXCESS IMPORTS.
TRADE BALANCE
TOTAL MONEY CIRCULATION
PROBABLY A RANDOM VARIATION OWING TO LARGE IMPORTS IN Feb. 1930
OLD SCALE of TRADE BALANCE SCALE
AVERAGE OF MONTHLY FIGURES FOR VISIBLE TRADE.
AVERAGE MONTHLY DEVIATION OF TOTAL MONEY AVAILABLE FROM 12 MOS. MOVING AVERAGE [NOTE ISSUE PLUS FIDUCIARY AND TOKEN COINS]
J F M A M J J A S O N D J

Graph No. 10

NATIONAL BANK OF EGYPT.

SEASONAL MOVEMENT YEARS 1928-1934

[AVERAGE OF MONTHLY DEVIATIONS FROM TREND



of comparison. (The unusual imports of February 1930 quite upset the Trade Balance curve : These imports were made in order to avoid the new Customs Tariff, and it is quite possible that but for this they would have spread over the next six months, thus merely increasing the unfavourable balance of the summer months, and decreasing the favourable balance of the early spring months. In that event the Trade Balance would follow the seasonal movement of circulation much more closely). Mere inspection of the two curves shown convinces us of the close correlation between the Trade Balance and the Circulation, and it is also quite apparent that the Circulation movements precede those of the Trade Balance by one month. In order to give some measure of this correlation, the Pearsonian co-efficient (1) has been calculated, allowing for the time lag of one month (2), *i.e.* by matching October Circulation with November Trade Balance, etc. and the result is a positive correlation of 0·82 (where unity represents perfect correlation). As we have just noticed, this relationship would have been even closer, were it not for the peculiarities of trade in February 1930. Up to this point, then, our summarized figures agree with the earlier conclusions.

On turning to graph No. 10 we may see the diagrammatic summary of the two series of figures just discussed, and also of the National Bank's Advances on Goods and Securities, and Securities Accounts : the Trade Balance has been moved one month to be the left so as to throw into relief the general similarity of the movements. Comparing the Advances and Circulation curves we may observe that the minimum points of these two appear in the same months, whilst the maximum point of Circulation occurs a month earlier than the Advances maximum. This may be interpreted as follows—the *other* banks are instrumental in increasing the Circulation, and the National Bank's Advances are somewhat later than those of other banks. This agrees with what has been said before about the general impression that the National

(1) The Formula adopted is :—

$$\frac{\Sigma\, D_1 D_2}{\sqrt{\Sigma\, D_1^2}\,\sqrt{\Sigma\, D_2^2}}$$

(2) Professor Bresciani-Turroni drew similar curves for the years 1926 to 1929, but did not point out the time-lag, which to the present writer seems important when trying to understand the actual working of the currency system. See "Some Considerations on Egypt's Monetary System" Cairo. p. 169.

Bank is tending to advance less on up-country cotton and is concentrating its attention on the movement of cotton at a later stage. Such a contention may well be disputed by those in a position to know of course, but the actual figures certainly indicate that tendency; whatever the reason, the National Bank's Advances attain their peak when the Circulation is falling—on average (1). If the peak month be omitted from the comparison, it seems that correlation is exceedingly close. Therefore, in order to decide between the one view and the other, the Pearsonian Co-efficient has been calculated from two angles :—

If Circulation figures be correlated with the *same* month Advances the co-efficient is 0·88 (positive).

If with the following month Advances it is 0·86, (positive). So we must accept the correlation of figures of the same month as being more accurate, though 0·02 is an almost negligible difference ; thus the balance of the argument is in favour of the thesis that National Bank Advances march in step with the general circulation of notes and coin, but that in the height of the cotton season the Advances lag behind a little.

A comparison of Advances with Securities leads us to suspect an inverse correlation here, and closer inspection indicates that the Securities movements precede the *opposite* Advances movements by one month ; that is, the National Bank seems to sell securities so as to be in readiness for the advance period (2). Indeed some of the securities sold may even come back to the Bank as security for the Advances against Securities. Accordingly, the co-efficient of correlation has been calculated, correlating Securities figures with the following month Advances figures, and the result is astonishing, *viz*: an inverse correlation of 0.97 (negative). It seems evident, taking the whole series of curves in graph No. 10, that National Bank policy, so far as seasonal movements are concerned at least, keeps reasonably in line with business conditions in Egypt—though the earlier study of the *actual* figures, rather than the average or seasonal figures, provided as good, if not better, evidence of this. If, as was argued above, the Advances and Circulation data showa direct correlation, then Securities

(1) Graph No. 5 shows that the maxima of Foreign Bills sometimes follow and sometimes coincide with those of Advances,

(2) See page 161 where when discussing graph No, 5 itwas mentioned that Cash was high just before the Advances maximum,

and Circulation must be inversely correlated, with a certain time-lag (in our figures one month) in between. The sequence may be reasoned thus: The National Bank sells Securities, and its Cash holding increases, thus putting the Bank's internal position in readiness. But the National Bank cannot *issue* more notes without having a sterling cover (Treasury Bills etc.). For the purpose of its own advances in Egypt the Bank might borrow some of its London Office's funds, and cause the Issue Department to issue notes against the sterling assets so obtained; but for the seasonal increase in the Total Circulation a much larger sum of sterling than that which may be at the disposal of the Banking Department is required. It is provided, of course, by sterling offered for sale by the other commercial banks which have connections in London, Paris, and elsewhere; it is this type of sterling borrowing which tends to tighten credit temporarily in London and enables a seasonal increase in note issue to be brought about in Egypt. In this way, we have a further argument in support of the following series of events which statistical observation leads us to believe occurs in each season in Egypt:—

The National Bank's accounts move as follows:

1. The minimum of Advances, at the same time as the minimum of Total Money Circulation.

2. The maximum of Foreign Bills, coinciding with the maximum of the favourable Trade Balance.

3. The maximum of Securities, some months after the weight of the cotton crop has been taken off the market.

The monetary system by means of which the economic activity of Egypt is carried on is, as we have described it in the foregoing, one of delightful simplicity. The foreign banks, in order to finance the cotton in its earlier stages, borrow abroad and, either directly or indirectly, sell the sterling to the National Bank at the fixed rate of 97·5. Notes are issued thereagainst, and banks lend to merchants and the like until the crop is finally sold at Alexandria. Exporters buy the crop and discount three months bills with their bankers, paying for the cotton (or else repaying Egyptian pound advances) with the proceeds of these discounts. The banks send the bills to London, Paris, etc., in repayment of the earlier borrowings; these bills are discounted at market rate for account of the Egyptian branch of the bank, and usually they are kept in portfolio by the London branch, which seldom resorts to re-discounting.

Thus London, Paris etc., prolong the advance against cotton till the bills fall due ; but payment for the cotton has already been effected so far as Egypt is concerned, when the exporter sold his bill to his banker. This leaves a large part of the value of the cotton, generally, in circulation in Egypt in the form of notes: it has meantime changed hands to some extent—the fellah and merchants work for the most part on borrowed money, and the proceeds of the crop are to some extent utilised in the repayment of loans, in payment for labour and so on, and thus the actual value of the crop is in the hands, by a process of re-distribution, of nearly everybody who has any connection with the cotton crop, that is to say ,the larger part of the population. The money thus redistributed is spent on various goods, many of which are imported : as notes are paid for such goods, the circulation is reduced, for the merchants who receive payment for their sales pay notes into the banks, in repayment, say, of advances under documentary credits and the like. In this way the notes gradually find their way to the banks, as payment for imports, and the banks pay in cash to the National Bank and buy sterling with which to meet the drafts accepted in London in connection with various import credits. Then the National Bank reduces the note circulation and at the same time disposes of Treasury Bills in London, and its London balance sheet is reduced on both sides : this action fundamentally is the same as a deflation in Egypt and a slight—perhaps insignificant—expansion of credit in London (for at least the velocity of credit and cash has been increased in the London market. On the other hand the exact significance of selling Treasury Bills and paying out cash to other banks may be a subject of controversy, though it seems clear enough on the face of it that, taking the London banking system as a whole, Tresury Bills are made available to the market, whereas documentary acceptances are withdrawn on maturity, the final withdrawal of these drafts representing the ultimate payment by Egypt for the imported goods *i.e.* a payment in cash).

The upshot of this is that Egypt depends on London and other money markets not so much for long-term capital as for short-term management of currency. After September 1931 Egypt dallied with the idea of leaving the sterling standard and following the gold currencies. Now such a step would involve the country in the series of complications which always accompanies the upsetting of monetary equilibrium, but in Egypt's case two outstanding difficulties would arise, one practical, the other, although also practical, best considered from a more theoretical standpoint.

Firstly, the question arises as to the backing of the note issue; if gold were selected, or even French Francs, the whole of the portfolio of Treasury Bills and Sterling Securities would have to be disposed of presumably, and replaced by non-fluctuating gold securities—and no doubt various financiers would endeavour to arrange that such a wholesale trading in securities should be attended by a profit to the "market" even if Egypt lost on the deal. If Sterling were left as note cover, then, in view of the fluctuations in the gold value of sterling, an elastic proportion would have to be maintained between Notes and Cover—a proportion which (in theory) need know no limits: this difficulty would probably rule out the proposition entirely, unless Egyptian currency were "managed" with a sterling basis, in which case, except for changes in the exchange rates, Egypt might just as well be linked to sterling.

Secondly, the more fundamental difficulties present themselves as theoretical points, but are probably more important:—About 30 per cent of Egypt's exports of cotton are sent to Great Britain, and payment is naturally received in sterling, via the exporters; also, by way of the present system of note issue, payment for most exports comes ultimately via London. The exchange problem for Egypt does not exist; she depends on the monetary policy of London, and on the value of sterling in relation to the rest of the world's currencies. If Egypt were to unpeg the Egyptian Pound from Sterling, the monetary system might ultimately recover from the ensuing confusion, but the immediate result (if the revaluation were in an upward direction) would be that sellers of cotton would get fewer Egyptian Pounds for their crop, the latter being valued, of course, in Sterling terms at Liverpool. The very first season after the unpegging would see widespread failures, for a sudden drop of 40 per cent in the value of the crop would be worse than the 1930 price fall: it would be ruin caused by a stroke of the pen. Economically, it could be argued, Egypt would be no worse off, for imports would cost correspondingly less, more especially as they are often priced in Sterling (*e.g.* Japanese and English goods). Thus anybody with Egyptian Pounds can buy a bigger quantity of English goods than before and ultimately of course, Egyptian price levels must all fall—so that all lenders receive 40 per cent benefit (if complete adjustment takes place—an unlikely event) and people who have borrowed suffer the corresponding reduction in incomes as they have to repay with more valuable money. The consequent deflation crisis would be more

important and far-reaching than the exchange crisis resulting from the sterling exchange fluctuations under the present system, for extreme deflation would mean the complete ruin of that class which produces Egypt's wealth—*i.e.* the fellaheen, the growers of cotton. With such a close inherent connection with sterling, both on general economic grounds and on the grounds merely of convenience of management of the financial system, Egypt has prospered, and the breaking of this link would be unwise. These factors, quite apart from things political, are a sufficient deterrent from upsetting the present comparative perfection of the monetary machine.

Prices Indices and the Circulation.

In the foregoing section it was pointed out that, whilst seasonal movements of the note circulation are closely related to cotton movements, the absolute level of the circulation depends not only on cotton movements and prices but also on a series of economic factors which are, singly, incommensurable. It will be argued in what follows that the figure which best epitomizes the economic factors in question is the index of wholesale prices.

In graph no. 11 we show indices of cost of living, cotton and general wholesale prices, and total money circulation (the absolute monthly figures). The cost of living index is scarcely representative, for the basis of calculation is the outlay of a clerk in Cairo ; yet it may be taken at least as a rough indication of the comparative stability of retail prices and the cost of services of various kinds, rent, etc when related to the more mobile wholesale index. The index for cotton moves with a much wider amplitude than that for general wholesale prices ; the cotton index, incidentally, concerns Sakel only, and the wholesale price index is that for Alexandria (actually the Cairo index of Wholesale prices does not differ greatly from that of Alexandria, so the latter was taken so as to be more comparable with Cotton prices, which of course are determined at Alexandria) Earlier in this essay various reasons were given as to why money circulation should correspond more to general factors than to cotton movements. Now, general economic factors, both foreign and domestic, influence the course of prices in wholesale markets ; moreover, cost of living indices and retail prices evince tendencies towards rigidity in the face of economic change, whereas wholesale prices are much more elastic, and may be said to represent more faithfully the contemporary conditions of demand and

supply. All this is commonplace. But Egypt's monetary system being, as we have several times pointed out, simple almost to the point of primitiveness, we may expect money circulation to bear a close correspondence to Wholesale prices. A glance at graph No. 11 convinces us that the circulatior bears a much closer relationship to the wholesale index than to the cotton index. Cotton reached it lowest point in 1931–1932, whilst the wholesale index fell later, attaining its minimum in 1933, evidence of the mobility of cotton prices in the world market, and of the comparatively late incidence of the full force of the depression in Egypt. But wholesale prices do not show such a *regular* seasonal movement as cotton prices, and it must not be overlooked that the money circulation has a distinct and fairly regular seasonal movement ; thus, in order to compare wholesale prices with the total money circulation, we must eliminate as far as possible the seasonal movement of the circulation. The only way in which we can do this is to average the monthly deviations from trend over the period 1928 to 1931, and subtract the monthly average thus obtained from the original data. Unfortunately this is not a perfect method : the amplitude of the seasonal movement in 1928 (when circulation was about L.E. 35 millions) is of necessity wider than that of say 1932 (when circulation was about was about L.E. 25 millions), and in *averaging* the monthly deviations we allocate an equal seasonal movement to all the years considered : such a method is supportable only on the grounds that the *normal* seasonal variation is exceeded in years like 1928 and is not attained in say 1932. In any case it certainly would not be correct to take the 12 months moving average of the circulation for purposes of comparison, for that would give a smooth curve with no variations due to extraneous factors. Furthermore, since we have already linked the seasonal movement of circulation with the Trade Balance, it serves no useful purpose to attempt to correlate circulation and wholesale prices on a short-term basis. So we have compared the deviations of the original data of of the Total Money Circulation (Seasonal movement removed) from the Arithmetic average over the years 1928 to 1934, with the deviations of Wholesale prices in Alexandria from their Arithmetic Average (no seasonal movement being taken into account), (1) and we have arrived

(1) There is a slight regular seasonal movement visible in the wholesale index, but as it does not correspond exactly with the seasonal movement of cotton prices, the original data for the index have been left–yet it must not be overlooked that the wholesale index includes prices of crops which are definitely seasonal in trend.

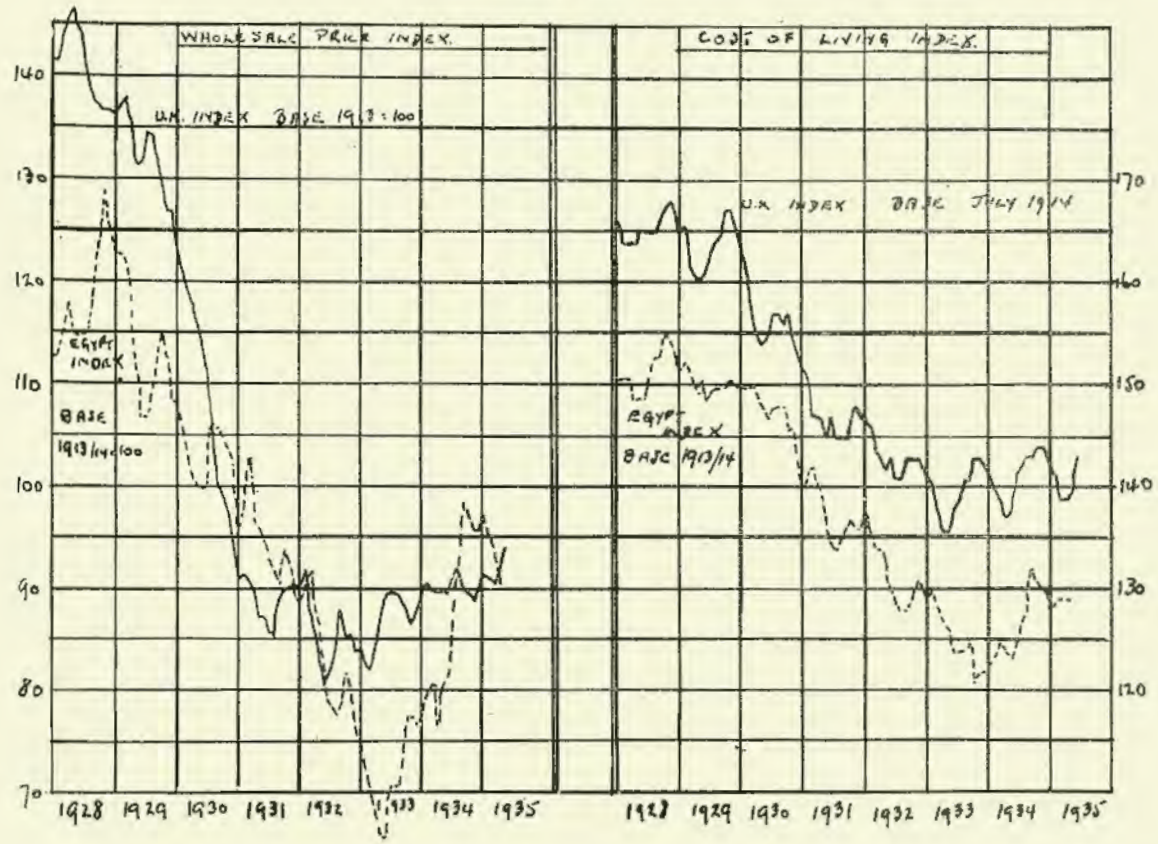
at a positive co-efficient of correlation (using the Pearsonian formula) of : 0·88, which is remarkably close in the circumstances. This seems to be the best empirical evidence of the truth of the thesis that whilst cotton movements and the trade balance affect the *Seasonal* expansion of currency, the average level of currency in circulation agrees more with wholesale prices in general. (1)

Graph no. 12 has been drawn so as to afford a means of comparison between the progress of wholesale prices and cost of living in England and in Egypt. A short-term comparison over particular seasons would lead nowhere ; Egypt is predominantly seasonal in exports, and her imports are steadier, more evenly spread : whereas Englands' prices depend upon a constant contact with world markets, and the seasonal movement is obscured by dealings with both hemispheres—hence there is no reason to suppose a short-term correlation of the two sets of figures. Taking the wholesale indices first, we can observe that the general downward movement in England was from 1928 to 1932, whilst in Egypt it was from 1928 (a few months later than in England) to spring 1933· Although in 1930–1931 the fall in England was more catastrophic than in Egypt, on the whole it may be said that the amplitude of the movement in each country is about equal over the period 1928 to 1932/3, the Egyptian minimum point following on the English after a lag of almost exactly a year. Moreover, after 1932 Egypt's prices seem to be more elastic—the fall in the season 1932/3 is more than twice as big as in England, and the succeeding rise in Egypt's index carries the figure above England's by the end of 1934.

The cost of living figures are interesting, for the English index gives a curve showing in every year a price fall after November till early spring, the rest of the year being devoted to making up the lost leeway. Whilst Egypt's index seems to follow roughly the same movement, on closer inspection it is seen that the seasonal peak in Egypt does not occur regularly in any one month. Nevertheless the close general correspondence of the two throws an interesting light on the effect of the depression of 1929–1932 on the comparatively rigid cost of living in two vastly different countries which are linked by the closest possible

(1) As further evidence that currency circulation does not depend on cotton prices only, we may mention that cotton prices tend to vary inversely as the amount coming forward for sale (apart from dependence on American prices) and thus cotton prices fall in the busy season just after circulation has been expanded to facilitate the financing of the crop.

GRAPH No. 12


WHOLESALE PRICE INDEX.
U.K. INDEX BASE 1913 = 100
EGYPT INDEX BASE 1913/14=100
140
130
120
110
100
90
80
70
1928 1929 1930 1931 1932 1933 1934 1935
COST OF LIVING INDEX.
U.K. INDEX BASE JULY 1914
EGYPT INDEX BASE 1913/14
170
160
150
140
130
120
1928 1929 1930 1931 1932 1933 1934 1935

financial links. From 1928, the peak year for both indices, England's fell 32 points by April 1933, whilst Egypt's fell 34 points by October 1933—a closeness of relationship which is surely not fortuitous ; there being no chance of monetary inflation or deflation in Egypt without the help of the London money market (directly or indirectly) it is not too much to suppose that even the ultimate price levels, the Consumption indices, must move in something like close correspondence, provided that the other general influences, the factors of production and distribution have not changed meanwhile. It is also interesting to notice that in England the Cost of Living " Low " follows the Wholesale " low " after an interval of 10 months (June 1932 to April 1933) whilst in Egypt the lag is only about 5 months (May to October 1933). This may be explained by the more *direct* dependence of the Egyptian retail market on Wholesale prices, whilst in England there are middlemen and a complicated credit structure to intervene and cause time-lags : thus if Egypt has been less sensitive to world depression in general, at least the cost of living or consumption demand has been quickly sensitive to changes in conditions in the more mobile markets in Egypt, viz ; the wholesale markets.

We have so far merely indicated the existence of a relationship between British and Egyptian indices, but we have not yet assigned a reason for such relationship ; we have ,as it were, adopted the expedient of saying that price is determined by demand and supply, without finding the reason for the latter. In the case of moving indices in a country with such a simple monetary system as Egypt, we might say that the movement of the index is dependent on the supply of money in the coun, try (a simple theory for a simple problem)—or we might argue that once a movement has been started, even on unfounded rumours, the necessary amount of money is called into circulation in order to support the changed price level (or is withdrawn from circulation in the case of a fall in prices). The following, however, seems to be a more objective explanation : The " value of money " in Egypt is determined by the anticipated profit on utilising funds in Egypt obtained from abroad and the degree of attraction of such anticipated profit is conditioned by the credit situation in all foreign markets, and particularly in the London market, the latter being as it were the reflection of all the others. The connection sounds exact. But the simplicity of the argument is deceptive. The monetary conditions in Egypt are so dependent on foreign conditions because the land of the Nile has little or no credit superstructure—any inflation or deflation takes place via the London money

market, and there is such a huge reservoir of liquid investments (Treasury Bills etc) in London that the effect of conditions in Egypt on the London market is, in itself, negligible. In pre-war times, when cotton was financed largely by gold shipments, Egypt's effect on the credit structure of London must have been very much greater.

Thus conditions and prices in Egypt are dependent almost entirely on British conditions and prices—though, since London is a *credit* market, and Egypt has such a comparatively primitive monetary system, a change in the credit conditions of London may bring about a somewhat modified or even delayed movement in Egypt. Basically, however ,the connection exists. Now, it may be asked, what of the similarity of movement of wholesale indices and cost of living? These are partly the expression of the connection just indicated—that is to say, in so far as wholesale and cost of living indices measure the "value of money" in certain modes of employment, they merely reflect the close relationship of currency conditions in England and Egypt (and, of course, credit conditions in countries other than England are related to Egyptian conditions in a more round-about way).

Besides this, however, there is a more direct relationship between wholesale indices in Egypt and Europe—a relationship through the international pricing system but only in so far as the items which are common to both indices are the subjects of international trade. For instance, the component part of the indices which consists of wheat prices ensures that, to the extent that wheat, of a certain kind, forms part of both indices, the two indices are closely related by the international price for that wheat—the only possible divergence of the once from the other, in the long run, being accounted for by cost of transport between the two countries concerned and or by the height of the tariff barrier. This does not define a rigid connection between any two countries, for as Mr. Hawtrey has pointed out many times, different articles or commodities may at different times be taken up into the foreign trade market. The exact correlation of any two wholesale indices as representative of the "value of money" occurs only when

(*a*) The same articles, with equal weights, are used in the construction of each index, allowance being made for tariff charges and transport. And

(*b*) The adjustment to changed monetary or credit conditions in the two countries is reciprocally instantaneous and equal.

Only so far as these conditions are complied with can we argue that wholesale indices in England and Egypt should move together with exact precision. The fact that they do move with a tolerable agreement is an indication of how far the reciprocal adjustment is flexible.

When we come to the cost of living indices, the connection is even more removed, yet fairly exact. There is little or no *direct* connection, for a close direct connection between the cost of services, or rent, in Egypt and England could be imagined only on the supposition of complete mobility of population and capital between the two. We must therefore abandon that angle of approach and consider the indirect link: and the most obvious and probably correct explanation is that the cost of living in each country, as calculated, is a function of wholesale prices and of the structure of other prices (*e.g.* interest, rent, services etc), and the similarity of the function, in each case, is itself dependent on the monetary and or credit structure, and on the closeness of the relationship, in each country concerned, of the many dependent variables which go to make up the final result. In other words, the cost of living in Egypt is comparable with that in England only so far as a certain set of circumstances extends an equal influence through the whole price system of each country until it reaches the ultimate consumption point ; if the fundamental connection between the two monetary structures is given, it is clear that complete similarity of operation of the certain set of circumstances in each country will result in equal movements in the cost of living indices, provided that the indices are computed in the same manner. Thus the agreement which exists between such indices in the case of England and Egypt is merely another indication of how the economic structure of the latter is dependent upon the former: and this indication is subject to the qualification that the index in each case, even if not representing exactly similar goods and services, must stand for a certain generalised consumption index, or " value of money " to the ultimate consumer. If it be held that, in each case, the index is not representative, even approximately, of the ultimate consumption price level, then the agreement between the two is purely fortuitous.

Finally, we may ask, is it to Egypt's detriment to be solinked to the major currency in the world of international exchange? The following may prove sufficient justification for the present system, apart from what has already been said earlier in this essay.

(1) British monetary policy has so far proved to be as good as, if not better than, any other,

(2) "Dependence" on the London money market is only the outward and visible sign of dependence on all the other money markets of the world—and London is certainly the most convenient reservoir of liquid funds. Egypt is no different in this respect from any other raw material producer—and London finance is in itself dependent largely on the mass of these latter.

(3) In spite of the powerful position occupied by the "Almighty Dollar" just after the War, the international exchange of the world has been on a sterling basis ever since the London Acceptance Credit and the London Bill became common—so Egypt has nothing to lose, and much to gain, by being in such close touch with the London Money Market.

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Cairo, February, 1936.