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Equilibrium and disequilibrium
in the German Economy
By J. Herbert Furth

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EQUILIBRIUM AND DISEQUILIBRIUM IN THE GERMAN ECONOMY

J. Herbert Furth

The development of the German economy between the middle of 1948 and the end of 1950 poses a paradoxical problem. In thirty months, Germany was transformed from a heap of ruins into a major economic power. Its industrial production and the volume of its foreign trade reached record levels. Despite these boom conditions, prices remained remarkably stable and wage rates advanced only in proportion to the rise in labor productivity. However, two dark spots spoiled the picture: serious unemployment and a rising import surplus.

Chronic unemployment and a chronic import surplus are symptoms of economic disequilibrium, but of two different and contradictory types. Unemployment indicates a lag of effective demand behind the potential supply of goods and services. The import surplus indicates a lag of actual supply of domestically produced goods and services behind effective demand. Germany's economic system seems unable to direct effective demand toward fuller utilization of idle domestic resources rather than toward exhaustion of the country's small reserves in foreign exchange and foreign credits.

The present paper proposes to explain this seeming paradox along the following lines: In a rapidly developing economy, imports tend to exceed exports, even in the absence of inflationary pressure, because imports are based on expected future consumption and production while exports are determined by past production. Moreover, in such an economy "hidden" unemployment tends to be replaced by open unemployment, even in the absence of deflationary pressure, because the labor force increases and because the rise in productivity makes employment expand less rapidly than output. These conditions, usually associated with underdeveloped countries, were present in developed countries like Germany during the period of recovery from the effects of war.

Germany's Development, 1948-50

Between the third quarter of 1948 and the fourth quarter of 1950, industrial production rose from about 55 to about 110 per cent of the 1938 level. The other sectors of the economy did not show the same rapid rise; in consequence, gross national product (at constant prices) reached in the second half of 1950 only about 95 per cent of 1938. Since Germany's population increased by 20 per cent between 1938 and 1950, per-capita income was still about 25 per cent below the level of 1938. However, we must remember that 1938 was a year of unprecedented boom in Germany. As a result of the Nazi policy of rearmament, the last traces of depression had disappeared and the national product had exceeded all previous records.

Foreign trade -- Germany's foreign trade expanded even more rapidly during the period than industrial production. Between the third quarter of 1948 and the fourth quarter of 1950, imports rose 83 per cent and exports 230 per cent in terms of dollars, but 110 per cent and 510 per cent, respectively, in terms of volume (Table 1). Until recently, volume rose faster than dollar value because of the devaluation of the German currency in September 1949, which lowered the dollar value but raised the volume of foreign trade. Only in the last quarter of 1950 did value rise more than volume.

By the end of 1950 both the volume and the value of international trade had far surpassed the prewar level, but the comparison is somewhat misleading. Trade of the Federal Republic of Germany with the Eastern parts of the former Reich is excluded from the foreign trade statistics; but in 1938 this trade was slightly higher than the Western Germany's total foreign trade, whereas in 1950, trade with Eastern Germany represented only 3 per cent of foreign trade. In the case of many finished manufactures, changes in Germany's pattern of domestic production and consumption have made up for the decline in trade with the East. In the case of foodstuffs and certain raw materials and finished goods, however, it has been impossible to substitute domestic production for imports from the East, and the Federal Republic has therefore had to expand its imports of these items from foreign countries. Taking these necessary changes into consideration, we may estimate that the volume of imports during 1950 was only slightly, if at all, above the 1938 level and that exports were somewhat below. Moreover, we must remember that the figures for 1938 reflect the autarkic policy of the Nazi regime; under liberal international economic policies, trade in 1938 would probably have been $1\frac{1}{2}$ times as high as it actually was.

Employment -- In June 1948, employment was at almost exactly the same level as in May 1939; in December 1950, it was about 7 per cent larger (seasonally adjusted). Unemployment, however, which in 1939 amounted to 0,5 per cent and in 1948 to 3.5 per cent of all employable workers, had risen to more than 10 per cent by the end of 1950 (Table 2). These aggregate figures hide important differences within the various sectors of the economy. In agriculture and public service, employment rose sharply between 1939 and 1948, and dropped between 1948 and 1950. The reverse changes occurred in manufacturing and commerce, where employment dropped between 1939 and 1948, and rose sharply between 1948 and 1950. In domestic service, employment dropped steadily from 1939 to 1950. In general, the distribution of the employed labor force was very much the same in 1939 and 1950, but it had been quite different in 1948. We shall see that this fact is important in helping to explain the change in unemployment.

Money and credit -- The expansion of money and credit paralleled the rise in production. Between September 1948 and December 1950 the money supply (currency in circulation and demand deposits, excluding interbank and government accounts) rose about 65 per cent. Bank credits to individuals and corporations, admittedly starting at an abnormally low level, rose 460 per cent in the same period (Table 3). Taking into account the changes in the territory and in the price level, we may say that currency circulation, demand deposits, and short-term bank credits all had reached the 1938 level by the end of 1950; savings deposits, long-term credits, and capital issues, however, remained at a small fraction of prewar.

Analysis of Germany's Development

In an effort to discover disequilibrating tendencies in the German economy during 1948-50, we may compare the change in money supply with the change in the supply of goods. The volume of currency and demand deposits has increased about as rapidly as industrial production; the velocity of circulation, as measured by the turnover of demand deposits, has shown no significant change. Since industrial production rose more rapidly than the production of other commodities and services, it seems that the supply of money -- volume times velocity -- rose somewhat faster than the supply of goods. This difference appears to have been greater in 1949, however, when there were more traces of deflation than inflation, than in 1950 when there were more traces of inflation than deflation. This comparison does not therefore explain the paradox of the German economy.

We may also try to compute an inflationary or deflationary "gap" by comparing planned savings and planned investments. Such an attempt suffers from our inability to find satisfactory data for planned, as distinguished from actual, savings and investments. As a rough approximation, we may assume that all "actual" investments were "planned", but that "planned" savings were represented by retained profits, purchases of newly issued securities by the public, and increases in time and savings deposits. On this shaky basis we may conclude that "planned" investments exceeded "planned" savings annually by about 20 per cent, and that three-fourths of the difference was financed by private credits and one-fourth by budget deficits. However, if the import surplus is included in our calculations, most of the "inflationary gap" is wiped out. In any case, the magnitude of the "inflationary gap" as calculated here is probably well within the margin of error, and therefore hardly significant. In particular, it does not explain the coexistence of an inflationary tendency in the international sphere and a deflationary tendency in the domestic sphere.

The correct explanation must take into account the peculiar dynamic character of the country's postwar economy. An annual increase of up to 75 per cent in the volume of foreign trade and up to 40 per cent in production may, after all, be expected to have some disequiliberating effects.

(a) Chronic import surplus without inflation

Rapid economic growth in itself is likely to result in a persistent import surplus. In a rapidly developing economy, production is limited less by anticipated demand than by available raw materials and equipment. Exports can be delivered only on the basis of past production; imports are brought in on the basis of expected future levels of consumption and production. Consumers' goods such as foodstuffs and finished manufactures are probably imported primarily according to future consumers' demand, extrapolated on the basis of current changes. Producers' goods such as raw materials and semi-manufactures are probably imported according to present plans for future production, also extrapolated on the basis of current trends.

During a period of rapid economic growth, exports could therefore catch up with imports only if they constituted a rapidly increasing fraction of domestic production. That is unlikely to happen, however, as long as domestic availabilities are below the level considered as "normal" by consumers and investors, and domestic demand therefore continues to rise about as fast as output. Under these conditions the best we would expect would be for exports to cover in each quarter the import volume of the preceding period; and such a development actually occurred in Germany in the second half of 1950.

"Normal" import surplus. On the basis of this reasoning, we should expect that imports during the fourth quarter of 1950 would reflect (1) the levels of consumption and production prevailing during the third quarter and (2) anticipated increases based on the expansion which occurred during the third quarter. This would mean, at constant prices, that imports of consumers' goods would be at about 100 per cent and producers' goods at about 110 per cent of 1938. Since imports consisted in almost equal parts of consumers' and producers' goods, total imports would be about 105 per cent of 1938. We should expect that exports, on the other hand, would reflect production during the second quarter, or be about 90 per cent of the 1938 level.

Assuming that foreign trade was approximately in balance in the base year, we should accordingly expect an import surplus equal to about 15 per cent of total imports. Actually, the import surplus in the fourth quarter of 1950 was equal to about 25 per cent of imports; however, we may account for that difference by the impact of the post-Korean situation.

Ever since the outbreak of the Korean war, and especially since the fall of 1950, there has been an increasing fear of shortages and rapid advances in the prices of industrial raw materials. This development has led all over Europe, first, to a tendency to increase inventories, and second, to a deterioration in the terms of trade. We can observe both these factors at work in the case of Germany's balance of trade.

Inventory accumulation — In the fourth quarter of 1950, industrial production was about 26 per cent, and national income not more than 13 per cent larger than the averages of the preceding twelve months. Imports of producers' goods, however, were larger by about 50 per cent, and imports of consumers' goods by about 30 per cent, both at constant prices. We may concede on the basis of experience during the postwar period that a change from an autarkic to a more internationalistic economic policy would result in a continuous rise in the import content of production and consumption. A rise in imports at a rate about $1\frac{1}{2}$ times as high as the rate of increase in production and consumption, respectively, might thus still be considered "normal". However, even under this generous assumption, the rise in imports during the fourth quarter of 1950 was larger by one-third than "normal" and this difference was apparently due to inventory accumulation. This factor — about equally distributed between accumulation of producers' and consumers' goods -- accounts for about one-fifth of the import surplus in that quarter.

Deterioration in terms of trade — In the same period, prices of exports were about 3 per cent and prices of imported consumers' goods were about 1 per cent higher than the average of the preceding twelve months; but prices of imported producers' goods were higher by 18 per cent. The resulting deterioration in the terms of trade accounted for an additional fifth of the import surplus in the fourth quarter.

Subtracting from the actual import surplus of 25 per cent of imports, the sums due to inventory accumulation and to the relative increase in import prices, we arrive at the "normal" import surplus of about 15 per cent of imports.

Financial factors — Our explanation seems to leave out entirely the influence of financial factors. Actually, however, it presupposes that — apart from imports financed by foreign aid — importers are able to finance their increasing orders faster than they receive the proceeds from the sale of goods imported previously; and this is possible only if the banking system grants them increasing credits. Such an expansion of credit prevents the increase in imports from exerting any deflationary influence it might otherwise have: the relation between purchasing power available for acquiring domestic goods and the supply of these domestic goods remains unchanged, the increase in supply due to imports being balanced by the increase in purchasing power due to new credits.

The situation is fundamentally the same as in the case of an increase in the supply of domestic goods financed by an increase in credits. There is, however, one important difference: in the case of rising imports, the maintenance of equilibrium between purchasing power and supply of goods coexists with a persistent disequilibrium in the balance of trade. In terms of savings and investments, the investment represented by the rise in inventories due to increased imports is financed by dissaving (foreign credits or depletion of reserves), but the balance of domestic savings and investments remains undisturbed.

The relation between short-term credits and imports can be studied, in the case of Germany, only for the period following the fall of 1949 when the responsibility for international commercial policy was finally transferred to the German authorities. Up to that time, the Allied authorities acting through the Joint Export-Import Agency had followed a policy of preventing commercial imports (imports not financed by foreign aid) from rising above exports, regardless of the requirements of the German economy. The Agency did this not, as some German critics averred, in order to sabotage the recovery of Germany, but in order to prepare Germany for self-responsibility by accumulating a modest reserve in foreign exchange. If this policy actually slowed down the pace of Germany's recovery in 1949, it also enabled Germany to liberalize its imports in 1950. Since the fourth quarter of 1949, however, commercial imports have moved approximately parallel to the amount of newly granted short-term bank credit (Table 4). The lag of changes in imports and in credits behind changes in production is consistent with our assumptions: first, that imports moved in response to preceding changes in production, and second, that the new credits were more closely related to imports than to industrial production as such. Furthermore, the relation is not accidental since a very large part of these credits were granted directly to importers.

(b) Chronic unemployment without deflation

The effects of rapid economic progress thus explain the persistence of a substantial import surplus without domestic inflation. There remains the need to explain the persistence of unemployment without deflation.

Unemployment did not actually increase in the period under consideration, despite the rise in the official unemployment figure. The high level of employment in agriculture and public service, in 1948, reflected a large volume of hidden unemployment. People found "work" on farms, not because there was a strong demand for additional agricultural workers, but because they were satisfied with room and board, at very little cost to the farmer himself, in times when room and board were virtually unavailable in cities. As soon as the extreme shortage of food and housing abated, they left the farms again for their accustomed city life. Similarly, employment in public service frequently was a mere disguise for unemployment relief. If we add the difference in agricultural employment between 1939 and 1948 and about half of the difference in public service employment to the official unemployment figure for 1948, we find that the total is virtually the same as the totals for 1949 and 1950. We have therefore to explain, not an increase in unemployment, but only the lack of a decrease.

This explanation may be found in the abnormally high rate of increase in the labor force after 1948. The number of persons seeking employment rose by 5 per cent annually, the natural increase being augmented by the inflow of refugees from the East and by the continuous shift of housewives into paid occupations. At the same time, working hours per week rose 6 per cent annually (in manufacturing industry) and productivity per man hour (also in industry) about 15 per cent. Therefore, the total supply of manpower increased annually by 27 per cent in industry, and by perhaps 15-20 per cent in the economy as a whole. The rise in industrial employment was able not only to absorb that increase, as far as the industrial labor force was concerned, but also to divert a substantial volume of manpower from non-industrial occupations. The non-industrial sector, however, only held its own, rising employment in trade and transportation being approximately offset by declining employment in agriculture and service.

In other words, the expansion of economic activity was strong enough to absorb an increase in labor equivalent to perhaps as much as 20 per cent annually; but it was not fast enough to absorb, in addition, such unemployment as existed at the beginning of the period. This situation could hardly be called deflationary; it might rather be interpreted as a dynamic underemployment equilibrium, and rigidities rather than deflationary tendencies should explain its persistence. Such rigidities can easily be found in the organization of industry, which seems to prefer a working week of about 49 hours to one of, say, 42 - 44 hours, although the change would permit the absorption of all excess unemployment; or in the housing shortage which prevents a shift in labor from surplus to deficit areas; or in the lack, in other sectors of the economy, of the expansive spirit that seems to characterize industrial leadership -- perhaps due to the elimination, by the Nazi regime, of the Jewish middle class which provided a large proportion of leaders in trade and finance. In any case, the situation seems compatible with monetary equilibrium.

Consequences for Economic Policy

This analysis of the causes of both the import surplus and excess unemployment in Germany leads to the conclusion that Germany is not suffering from "fundamental disequilibrium" in the sense of the Bretton Woods Agreements. All the main factors which may be considered to constitute disequilibrium appear to be temporary; none of them indicates a disproportionality between the price and cost levels in the German and the world markets at official exchange rates. It is true that black market exchange dealings are frequent; but these dealings are due to restrictions upon the transfer of German funds and to the fear of future developments rather than to a deviation of the official exchange rate from purchasing power parity. Devaluation of the German currency would indeed cut the import surplus, but only at the expense of hampering the country's economic growth and of creating further, and perhaps more permanent, disequilibria once the rapid rate of economic expansion and the rapid increase in the labor force come to an end.

Reduction of import surplus -- Germany's import surplus is attracting particular attention because it may endanger the working of the European Payments Union. Our analysis indicates that the greater part of that surplus is due to the present dynamic character of the German economy rather than to financial mismanagement; and this character -- and therefore the import surplus -- is not likely to be permanent.

To the extent that the import surplus is the result of the rapid expansion in domestic production and consumption, and at the same time a necessary prerequisite for continued expansion, it would be impossible to eliminate it without endangering the pace of the country's progress. In fact, the recognition of the close relation between import surplus and economic progress has been the basis of the European Recovery Program. In most Western European countries the phase of rapid progress started as early as 1945, and is now drawing to a close; in Germany, it started as late as 1948 and is therefore further from completion than, say, in the United Kingdom or France. We cannot expect the present rapid pace to last much longer -- at this rate Germany would attain in 1952 twice the level of 1938 -- ; but as long as it continues, Germany may be expected to continue to reduce its reserves or to need further credits or grants.

However, this argument applies only to that part of the import surplus which is to be considered "normal", and to that fraction of the recent "abnormal" excess which is due to the deterioration in the terms of trade. The remaining part of the "abnormal" import surplus, which reflects inventory accumulation, could be eliminated by domestic financial measures, without endangering economic progress. Virtually the entire inventory accumulation has been financed out of short-term credits, and any reduction in those credits would automatically make it impossible for entrepreneurs further to increase their holdings of raw materials.

The German monetary authorities are fully aware of this and have repeatedly announced severe credit restrictions. However, all available evidence indicates that, until recently, these announcements have not been carried out: short-term bank credit has continued to expand and to be financed by the rediscounting of bills with the central banking system.

This credit policy has probably benefited the German economy, at least in the short run, since it has enabled German industry to buy up raw materials before prices reach their peak, and especially before the threatened system of allocations cuts Germany off from raw materials needed in industries considered unessential by the Allied authorities. On the other hand, the policy has hurt the interests of all other industrial countries which have to compete for scarce materials in the world market. Apart from the question of praise or blame, however, it may be stated that inventory accumulation, like the present rapid rate of economic progress, is a temporary development, unlikely to influence Germany's foreign trade in the long run.

The short-run aspects of the situation would probably not be considered so critical if there were an active international capital market. Under pre-1931 conditions, an import surplus connected with rapid economic development was financed by private capital transactions. Interest rates and investment yields are today perhaps three times as high in Germany as in the United States; it is therefore reasonable to assume that if it were not for considerations of political risks, private capital would have been willing to finance an import surplus as large as the present one. A flow of private capital could automatically adjust itself to changes in the domestic picture while the prevailing system of government loans or grants is highly inflexible, inasmuch as it invites overimportation in times of a relatively low demand for imports, and makes necessary underimportation when the demand rises before the mechanism for adjusting the credit or grant basis can be set into motion.

As long as the political situation of the world is such that foreign creditors must be afraid of war, revolution, exchange controls, or other forms of expropriation, countries undergoing rapid economic growth will not be able to rely on private financing of their import surpluses. In the absence of such financing, they must continue to expect periodic "crises" in their balance of international payments -- unless they abandon the principles of a free economy and adopt complete government planning of consumption and production. The Bretton Woods institutions will fulfil a most important function if they help developing countries to meet that threat; not merely by granting financial assistance but also by advising them on the proper accumulation and use of monetary reserves.

<u>Elimination of excess unemployment</u> -- Since the persistence of excess unemployment is not due to deflationary pressure, there would be no need to engage in anti-deflationary monetary policies. Such policies would increase the pressure on the balance of payments, and if the foreign exchange and credit situation did not permit an increase in imports of raw materials, it would not even accelerate the rise in industrial production.

This does not mean, however, that the persistence of unemployment must be taken as a matter of course. In a country like Germany it would be easy, for instance, to devise a public works program which would not require deficit finance or an increase in imports. Huge quantities of rubble have still to be removed, and much work has to be done to improve housing as well as city and country planning. A moderate increase in government expenditures would provide the funds necessary to abolish all excess unemployment; and government revenues could sufficiently be raised merely by bringing the collection of income taxes on large incomes back into the neighborhood of pre-Nazi honesty and efficiency. The resulting transfer of about 1 per cent of the total national income would be virtually neutral as far as aggregate consumption and investment is concerned, but it would go far in removing economic, social, and political difficulties; in particular, it would thwart the pro-Soviet and pro-Nazi propaganda which harp on the absence of unemployment under totalitarian leadership.

Conclusion: The General Problem of Economic Development

Perhaps more interesting than these practical implications, however, are the relations of our problem to the general theory of economic development. Germany is not an underdeveloped country. However, the war and its aftereffects have put virtually every one of the belligerent countries in continental Europe into a situation which is very similar to that of an underdeveloped country.

Immediately after the war, resources were far from fully utilized and the countries lacked both past accumulation and the prospect of future accumulation of funds sufficient to bring about a fuller utilization. Hidden unemployment in the form of agricultural overemployment was rampant. This unemployment as well as the underutilization of other resources was due, not to the lack of effective demand, but to the lack of real capital: in fact, most countries suffered from inflation both in the domestic and the international sectors of the economy. Thus, their unemployment was "Marshallian" rather than "Keynesian". All countries were confronted with problems such as promoting the inflow of foreign capital; constituting (or reconstituting) a domestic capital market; coordinating the rate of development and the rate in the increase in the labor force; and avoiding an inequitable distribution of the increased national income which was likely to lead to dangerous social and political consequences as well as to a dissipation of income in prematurely increased consumption. These problems and many others, which were particularly pressing in Germany, are also to be found in most underdeveloped countries.

The theory and practice of developing underdeveloped countries are probably the most important economic problems of our times. The study of recent developments in Germany may well contribute to their solution.

Table 1

Foreign Trade of Germany, 1948-50

	Imports		Exports		Import Surplus	
	Value 1/	Volume 2/	Value 1/	Volume 2/	Value 1/	Volume 2/
1948, third quarter	498	555	207	210	291	345
fourth quarter	357	470	228	255	129	215
1949, first quarter	430	515	258	280	172	235
second quarter	508	680	285	325	223	355
third quarter	663	665	301	355	362	310
fourth quarter	635	865	284	444	351	421
1950, first quarter	592	820	356	582	236	238
second quarter	529	730	422	697	107	33
third quarter	670	925	514	836	156	89
fourth quarter	913	1159	688	1088	225	71

1/ Millions of dollars; quarterly totals.

2/ Index representing millions of reichsmarks of 1936 prices; quarterly totals: figures through 1949, third quarter, estimated on basis of data for US - UK zones.

Source: Aussenhandelsstatistik der Bundesrepublik Deutschland.

Table 2

Production and Employment in Germany, 1948-50

	Industrial Production 1/ (1936=100)	Employment 2/ (Millions of workers)	Employment in Manufacturing Industries 2/ (Millions of workers)	Unemployment 3/ (Millions of workers)
1948, second quarter	50	13.5	3.7	0.5
third quarter	64	13.5	4.0	0.8
fourth quarter	75	13.7	4.2	0.8
1949, first quarter	83	13.5	4.4	1.2
second quarter	87	13.5	4.4	1.3
third quarter	88	13.6	4.5	1.3
fourth quarter	97	13.6	4.5	1.6
1950, first quarter	98	13.3	4.5	1.9
second quarter	106	13.8	4.7	1.5
third quarter	116	14.3	4.9	1.3
fourth quarter	131	14.2	5.1	1.7

1/ Industrial production, including electricity and gas, but excluding construction, beverages, and tobacco, per working day; quarterly averages; figures for 1948 estimated on basis of data for US - UK zones.

2/ Wage earners and salaried employees at end of quarter; figures through 1949, second quarter, estimated on basis of data for US - UK zones.

3/ End of quarter

Source: Wirtschaft und Statistik, and Monthly Reports, Bank Deutscher Laender.

Table 3

Money and Credit in Germany, 1948-50

		Money supply 1/	Short-term Credits 2/	Medium and long-term credits 3/
			(Millions of Deutsche Marks)	
1948	September	9,566	3,011	n. a.
	December	11,518	4,389	282
1949	March	11,609	5,235	477
	June	12,502	6,017	1,140
	September	13,039	7,406	1,315
	December	13,439	8,837	1,818
1950	March	13,500	9,796	2,464
	June	14,337	10,310	3,208
	September	15,489	11,485	4,196
	December	15,769	12,838	5,250

1/ Currency and private demand deposits with commercial banks; end of quarter. Because of statistical changes, figures before and since December 1949 are not strictly comparable with each other.

2/ Short-term credits of reporting commercial banks to individuals and business corporations, excluding prewar credits in foreign currency; end of quarter.

3/ Medium and long-term credits of reporting commercial banks to individuals and business corporations; end of quarter. Figures for September and December 1950 adjusted to eliminate statistical changes.

Source: Monthly Reports, Bank Deutscher Laender.

Table 4

Changes in Commercial Imports, Production, and Credit in Germany, 1949-50

	Change in Commercial Imports 1/	Change in Industrial Production 2/	Net Increase in short-term Credits 3/
1949, fourth quarter	+ 71	+ 9	1,431
1950, first quarter	+ 67	+ 1	959
second quarter	- 43	+ 8	514
third quarter	+ 128	+ 10	1,175
fourth quarter	+ 236	+ 15	1,353

1/ Millions of dollars: change in quarterly totals; figure for fourth quarter, 1949, estimated on basis of data for US - UK zones.

2/ Percentage points (1936=100); change in quarterly averages (Table 2).

3/ Millions of deutsche marks; change in figures for end of quarter (Table 3).