# NATIONAL ACCOUNTS FOR ANALYSING CREDIT MARKET CONDITIONS

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It is only within the last two years that the published United Kingdom accounts have been extended to include sector financial accounts; their use for market analysis is, therefore, still in its infancy.

The sectors and sub-sectors distinguished in the financial accounts agree very closely with those recommended by the Working Group on Financial Statistics of the Conference of European Statisticians. A major difference is that in the United Kingdom accounts particular emphasis is placed on the distinction between the public sector and the private sector. For this purpose the public sector consists not only of general government but also includes public corporations (that is, public non-financial corporate enterprises). The classification of assets and liabilities is based on a general list which is also similar to that developed by the Conference of European Statisticians.

Because of the large capital formation of public corporations and local authorities, the public sector is normally a substantial borrower from the private sector, although its borrowing requirements fluctuate considerably from quarter to quarter because of the uneven incidence of tax receipts. The personal sector provides about one-third of the total saving of the economy, much of which is in the form of contractual saving—through life assurance and superannuation funds and the repayment of house purchase loans. No direct information is available about transactions in stocks and shares by the personal sector, but it is estimated that the sector is a very large seller of securities and in recent years its sales have amounted to £700 million a year.

One factor which is important in the analysis of financial accounts and which is not shown specifically as part of the system is the rate of interest. The proportion of personal saving going into the different forms of short term assets has tended to vary according to the relative rate of interest received. The rate of interest also affects the pattern of borrowing by public authorities.

The United Kingdom prepares short term forecasts of national income and of the balance of payments, and also forecasts of the borrowing requirement of the public sector and of the central government in particular. For internal purposes, forecasts are made of the various ways in which the government is expected to finance its borrowing requirement. These forecasts provide a useful framework for considering monetary prospects and are particularly important for showing the relation between the forecasts of the balance of payments and of government borrowing from domestic sources, especially from the banks.

#### I. Introduction

It is only within the last two years that the published United Kingdom national accounts have been extended to include sector financial accounts. The use of such accounts for market analysis is therefore still in its infancy. We have a number of ideas, some of which have already been tried out, but not over long enough periods for firm conclusions to be reached. Before dealing with these, however, it is necessary to fill in some details of the background.

# II. Background

A big impetus to the collection of financial statistics in the United Kingdom was provided by the Report of the Committee on the Working of the Monetary System (the "Radcliffe" Report) which was published in the Autumn of 1959. This included a chapter on statistics with some fifty recommendations, most of which have now been implemented. There are still some important gaps in our knowledge of financial flows but the material now available is sufficient to provide the main outlines of the accounts.

The extension of the national accounts to include financial data was simplified by the fact that the main accounts are already based on institutional sectoring. Five sectors are distinguished for the domestic economy—central government, local government, public corporate enterprises, private corporate enterprises and personal (including unincorporated enterprises)—and for each of these a capital account is available, giving figures of saving, capital formation, capital transfers and a balancing item "net acquisition of financial assets". The task therefore was to break out an additional sector for financial institutions and to analyse the item "net acquisition of financial assets" into the various types of financial transactions. Most of the information required for a "Rest of the World" sector was already available in the balance of payments accounts but not all of it was published in the most appropriate form.

## III. Sectors

Some features of the sectoring should be mentioned. For convenience, the financial institutions sector is at present limited to corporate enterprises. Although there are some unincorporated enterprises in this field, notably stock jobbers, no attempt has yet been made to segregate them from the rest of the personal sector. Within the financial institutions sector a number of sub-sectors are distinguished—banks, insurance companies, superannuation funds, building societies, investment trusts, unit trusts, hire purchase finance companies—but the main sub-division is between banks and other financial institutions. The banking sector includes the Banking Department of the Bank of England but the Issue Department is treated as part of Central Government. The latter sector also includes the National Insurance Funds, the Post Office Savings Bank and the ordinary departments of the trustee savings banks.

It will be apparent that the sectors and sub-sectors agree very closely with those recommended by the Working Party on Financial Statistics set up by the Conference of European Statisticians. There is, however, a major difference in the way the sectors are grouped in the United Kingdom. A particular interest is in the distinction between the public sector and the rest and for this purpose the public sector consists not only of central and local government but also includes public corporations and other public enterprises. Apart from a relatively small amount of short term finance provided by bank advances the public corporations borrow from the central government all the money they require to meet the excess of their capital formation over the current surpluses available from their trading activities. Local government authorities on the other hand can and do raise funds direct from the private sector by stock issues and other means, but they are also financed to a considerable extent by grants and loans direct from the central government. It is therefore more useful to look at the borrowing requirements of the public sector as a whole rather than those of its component parts. In particular, it would serve no useful purpose to group the public corporations with private non-financial corporate enterprises since their sources of finance are so different.

#### IV. Data Available

The classification of assets and liabilities for each sector and sub-sector is based on a general list which is very similar to that developed by the Conference of European Statisticians but the degree of detail is varied to suit the circumstances of particular sectors. Thus for public sector stocks it is considered important to obtain from all the major holders a breakdown according to the term to maturity. Again, under the general heading for mortgages, separate figures for house purchase loans are obtained from all the main sources of such loans.

Nearly all the data available on transactions in financial assets and liabilities are obtained at least quarterly—some series are available more frequently—and are presented in both quarterly and annual accounts. The accounts for each sector are shown as time series, and for each year and quarter are also prepared in matrix form to show the inter-sector flows. A specimen of the matrix for the fourth quarter of 1964 is attached.

In addition to the quarterly data on transactions in financial assets, annual data on financial assets and liabilities in balance sheet form are collected for financial institutions and some of the other sectors. It has not yet been possible to obtain all this information on a consistent basis of valuation—some institutions provide figures at market value while others only give nominal or book values. But although these discrepancies make it impossible to aggregate the figures for the financial institutions sector as a whole, the data still provide a useful background to the study of the transactions of the various sub-sectors.

#### V. The Public Sector

Because of the large capital formation of the public corporations and the local authorities, the public sector is normally a substantial net borrower over the year as a whole. Its requirements fluctuate considerably from quarter to quarter, however, mainly as the result of the uneven incidence of tax receipts. They are also influenced by the balance of payments position: an increase in the reserves of gold and convertible currencies requires government finance, while a

fall in the reserves provides sterling for other purposes. Borrowing from abroad also reduces the Government's need for finance from domestic sources. The public sector's operations in the credit market and the form which they take—stock issues, Treasury Bills, local authority temporary borrowing, etc.—are of great importance because of the influence they have on the money supply, on the investment policy of the financial institutions and on the availability of funds for other borrowers.

## VI. The Personal Sector

The personal sector provides about a third of the total saving of the economy and the forms which this saving takes are therefore of considerable importance. A notable feature of the account for this sector is the high proportion of saving in what may be termed "contractual" form—the net increase in the funds of life assurance companies and superannuation funds and the repayment of loans incurred in previous periods for the purchase of houses and consumers' durable goods. In recent years, increases in life assurance and superannuation funds have accounted on average for more than half of the total increase in personal saving. This contractual saving tends to increase fairly steadily from year to year and the main interest is therefore in the variations in other forms of saving and in new borrowing.

No direct information is available about transactions in stocks and shares by the personal sector. Since October, 1964, the London Stock Exchange has provided an analysis of turnover by type of security, but no analysis by sector is given. However, estimates of transactions in government securities and company securities by the personal sector have recently been made both for quarterly and annual periods as a difference between estimates of the aggregate of the sales and the aggregate of the purchases of all sectors other than the personal sector. Reasonably reliable quarterly figures of transactions in securities are available for the public sector, the banking sector and other financial institutions and for the overseas sector, but the information available for industrial and commercial companies is incomplete. Estimates of transactions by the personal sector, obtained in this indirect way, were described in an article in the April issue of Economic Trends. They show that the personal sector is a very large seller of securities; in each of the two years 1963 and 1964 sales are estimated at about £700 million a year. Some of the sales may be associated with the payment of death duties (which amount to about £300 million a year) and the breaking up of estates, and some may be the counterpart of investment in new dwellings and the purchase of annuities. Others may represent sales by company directors and their associates when their businesses "go public". The figures given in the attached table suggest that there is a steady switching of direct holdings of securities to indirect holdings through life insurance and superannuation funds, unit trusts and other financial intermediaries.

The table attached shows that there is a fairly large unidentified item in the financial transactions account for the personal sector. This reflects errors of estimation in the income and expenditure account of the personal sector, the balance in which appears, of course, as the opening entry for "total saving" in

the personal capital account. One known error is that little is known about current and capital transfers from companies to the personal sector in the form of gifts and payments for services rendered to charities and other private non-profit-making institutions. The unidentified item also includes as negative items unrecorded increases in trade and other credit received by the personal sector.

In spite of the deficiencies in the statistics, the financial account for the personal sector can be used for examining the various ways in which funds are channelled, either indirectly through financial intermediaries, or directly, to finance the capital formation of other sectors, especially that of the public sector.

# VII. Non-Financial Company Sector

For industrial and commercial companies (that is, companies other than those classified as financial institutions) the main interest is in the extent to which they finance their capital formation from their own resources and in how any balance is met by borrowing. There is also an interest in measuring their cash expenditure on acquiring subsidiaries and trade investments. The only information obtained direct from companies at present is that given in their published balance sheets and that collected from a number of large companies about their overseas transactions for balance of payments purposes. Published balance sheets of companies are regularly analysed by the Board of Trade and provide details of their sources and uses of capital funds. Unfortunately, these accounts relate only to the activities of very large companies, about 2,500 in all. In total, their income is equal to about one half of the total for all industrial and commercial companies, but it is thought that their financing operations may not be typical of those of all companies. Figures of investment in fixed assets and stocks for these large companies are generally in excess of their figures of current saving. On the other hand, the figures for all companies provided by the national income statistics generally show a surplus of saving over investment. It has not vet been possible to reconcile the two sets of data.

A certain amount of data about the financial transactions of companies is available from other sources, particularly from returns provided quarterly by financial institutions and from information published in the daily press. For example, banks provide figures of advances to and deposits by companies; and other financial institutions (e.g. insurance companies) provide figures of loans. Figures of new capital issues *less* redemptions by quoted public companies and cash expenditure on acquiring subsidiary companies are compiled from information published in the daily press. But published balance sheets form the only source of information on changes in trade credit and on changes in holdings of marketable securities and trade investments.

# VIII. Financing Institutions Sector

Comprehensive data is available quarterly, and in some cases monthly, on the financial transactions of the banking and financial institutions sector. For some of the groups, however, stratified sampling is used, only a small proportion of the smaller institutions being required to make returns. In the banking sector, the movement in bank advances, which is analysed both by sector and by industry, is of major importance. The investment policy of the big institutional investors—the insurance companies and superannuation funds—in varying their purchases between equities and fixed interest stocks, short dated or long, plays an important part in the stock market, both in influencing the course of prices and in creating the conditions under which new issues may succeed or fail.

#### IX. Rest of World Sector

The items in the account for the overseas, or rest of world, sector are a reclassification of the items in the Balance of Payments accounts, which appear in the long-term capital account and under "monetary movements". In the Balance of Payments accounts the classification is based mainly on the object of the transaction—inward and outward portfolio investment by the private sector at home and abroad, sterling holdings of overseas governments, etc.—while in the financial accounts the classification is based on the type of asset or liability, in line with that used for the domestic sectors.

#### X. Interest Rates

One factor which is important in the analysis of financial accounts, but which is not shown explicitly as part of the system, is the rate of interest. More precisely, it is the difference in the rate of interest both over time and as between one form of financial instrument and another. For example, in the United Kingdom, there are a wide variety of channels for personal saving in small amounts and with facilities for quick withdrawal. These include deposits with the Post Office and trustee savings banks, building societies and commercial banks, and National Savings certificates and bonds. The Post Office and trustee savings banks (ordinary departments) allow interest on deposits at a rate which is always the same. The rate for time deposits with banks varies automatically in line with Bank Rate. The building societies vary their rates from time to time broadly in line with Bank Rate but they do not always follow short term fluctuations. The same is true of the rates of interest obtainable on National Savings certificates and bonds. The proportion of personal saving going into each of these various forms of investment tends to vary according to the relative interest rate received. For example, during 1964, the National Development Bond was introduced to replace the Defence Bond, which had a lower rate of interest. One result was for money to be switched from building societies to these new bonds. Towards the end of the year, Bank Rate rose sharply from 5 to 7 per cent and this was associated with further withdrawals of money from building societies and increases in money deposited with the commercial banks and with local authorities.

Since deposits with savings banks and purchases of bonds provide direct finance for the Government, while building societies provide mortgages on private houses, changes in the structure of interest rates can result in changes in the needs of the Government and of private house buyers for finance from alternative sources.

The rate of interest also affects the borrowing pattern of local authorities. When the rate is high, they borrow as much as possible by way of short term finance, postponing long term issues and mortgages until the rate falls to a figure which is regarded as more reasonable. For example, in the fourth quarter of 1964, when Bank Rate rose, local authorities were forced to pay high rates of interest, and all their net borrowing, other than that from the central government was temporary. High interest rates tend to attract short term funds from overseas, either directly or indirectly, through the United Kingdom offices of accepting houses and overseas banks, and these help to meet a large proportion of the needs of local authorities. But this is not always the case. In the fourth quarter of 1964, for example, although local authorities were offering high rates for temporary money, funds were withdrawn by overseas residents and unusually large amounts had to be borrowed from the personal sector and from non-bank financial institutions.

As mentioned above, insurance companies and superannuation funds exercise an important influence on the behaviour of the stock market. Their combined funds are now increasing at the rate of over £1,100 million a year. The investment of this large and increasing amount is confined mainly to securities, but it also provides an important source of funds for house purchase, for loans and other mortgages and even for an appreciable amount of capital formation, since some insurance companies provide funds for the erection of large blocks of offices, etc., for letting and remain as owners rather than as mortgagees. Insurance companies and pension funds are very large holders of company fixed interest securities (debentures). In both 1963 and 1964, their acquisition of debentures was equal in value to about 90 per cent of the total net issues of debentures by companies quoted on the Stock Exchange. The financial accounts throw light on the way these institutions switch from one type of security to another. The figures suggest that government marketable securities are considered an alternative to debentures. When there is a fall in issues of debentures, insurance companies and pension funds increase their take up of government securities, and conversely. There is also a considerable amount of switching between different securities within the same general category. For example, in 1964, insurance companies acquired £743 million of British Government securities and sold £655 million. Only the net figure of £88 million appears in the financial transactions accounts but separate figures for purchases and sales are shown in supplementary tables.

#### XI. Forecasting

The ultimate objective of these analyses is, of course, not merely to interpret what has happened in the past, but to establish relationships so far as they exist, which are of value in assessing current movements and forecasting the future. In common with an increasing number of other countries, the United Kingdom regularly prepares short term forecasts of national income and expenditure and of the balance of payments. The methods adopted were described in an article which appeared in the August, 1964 issue of *Economic Trends* and in "Techniques of Economic Forecasting" (O.E.C.D., 1965). The main purpose of the estimates is to measure the likely changes in the demand for goods and services at constant prices, in the gross domestic product, and in the balance of payments. The forecasts are made in terms of both constant and current prices and provide

# TRANSACTIONS IN FINANCIAL ASSETS

# Analysis by sector and type of asset 4th quarter 1964

							£ million
	Public sector	Financial institutions		Other private sector			
		Banks	Other	Industrial and commercial companies	Personal sector	Overseas sector	Unallocated
CAPITAL ACCOUNTS Saving(1). Capital transfers (net). less Gross domestic fixed capital formation. less Increase in value of stocks and work in progress	131 38 -690 4	1 <u>27</u> - <u>34</u>		904 4 -585 -162	344 - 42 -274 -28		
Net acquisition of financial assets	-517		93	161	_	78(2)	185(3)
FINANCIAL TRANSACTIONS ACCOUNTS(4) Notes and coin Treasury bills British government securities National savings: Deposits Certificates and bonds Tax reserve certificates Net Exchequer indebtedness to Bank of England, Banking Department Local authority debt: Quoted securities Other long-term Temporary borrowing	- 39 - 7 6	9 -178 46 	- 35 35 20	- 64 3 31	64 - 43 <sup>(5)</sup> 31 31 19 13 50	- 62 64     } - 17	52
Deposits with banking sector  Deposits with building societies  Deposits, etc. with hire purchase finance companies  Deposits with other financial institutions	9  	-238  	26 107 15 5	107 1 9	223 106 11	38 - 5 - 5	-165 <sup>(6)</sup>
Advances by banking sector (except to local authorities) Commercial bills with banking sector Hire purchase debt	<u>8</u> <u>5</u>	302 129 —	$-{22\atop34\atop10}$	$-130 \\ -100 \\ 10$	$-\frac{8}{-25}$	-194 5 	

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				Other private sector		-	
	Public sector	Financial institutions			Parsonal		
		Banks	Other	commercial companies	Personal sector	Overseas sector	Unallocated
Loans for house purchase:							
Central government	1	_	_		- 1		
Local authorities	39		152		- 39	<del></del>	
Financial institutions (excluding banks)  Other loans by central government to the private sector	4		153 1		-153		<del></del>
Loans by superannuation funds to parent organisation.	- 14	_	16	— 3 — 2			
Other loans and mortgages by financial institutions	17		10		_		_
(excluding banks)			46	<b>- 45</b>	- 1		
Unit trust units		_	— 18		18	_	
Capital issues			- 12	$-57^{(7)}$	<b>−167</b> <sup>(5)</sup>	<b>— 13</b>	
Other	<b>—</b> 18	5	163	86	}	13	
Life assurance and superannuation funds			-275		275		
Other identified home assets	— 16	3	33	• •	••		- 20
Gold and currency reserves	- 80				_	80	
Inter-government loans	33			-		<b>— 33</b>	
Transactions with I.M.F., etc	-358		_			358	
Long-term	2			50	_	- 52	_
Short-term	<b>— 13</b>		- 2	42	_	$-\frac{1}{27}$	_
Miscellaneous short-term home assets (net)	_ 71	_	65	70	66	_	
Total identified assets	-570 53	- 9 102		92 69	470 -470	150 - 72 <sup>(8)</sup>	-133 318
Net acquisition of financial assets(4)	-517		93	161	_	78(2)	185(3)

Source: Financial Statistics, May, 1965

<sup>(1)</sup> Before providing for depreciation, stock appreciation and additions to reserves.

(2) Equals, apart from the change in sign, the current balance in the balance of payments accounts.

(3) The residual error in national income accounts.

(4) Acquisition of assets or reduction in liabilities is shown positive; sales of assets or increase in liabilities negative.

(5) Residual, including unidentified transactions by industrial and commercial companies.

(6) Cheques in course of collection and items in transit which cannot be allocated by sector.

(7) Capital issues by quoted public companies only.

(8) The balancing item in balance of payments accounts.

a basis for preparing forecasts of the capital accounts for each of the different sectors, showing saving and capital formation with net borrowing or lending as a residual. A special interest is in forecasting the borrowing requirement of the public sector and of the central government in particular. Forecasts are now published in the *Financial Statement* (which is issued when the Budget is presented) of the current and capital transactions of the central government in the coming financial year. These give forecasts of loans by the central government to local authorities and public corporations, to the private sector and to the overseas sector, and of the government's own capital formation. The residual in the account is the central government's expected borrowing requirement *plus* sales of gold and foreign exchange.

For internal purposes, forecasts are also made of the various ways in which the government is expected to finance its borrowing requirement. These include issues of notes and coin; sales of non-marketable debt, such as national savings certificates and bonds; and sales of marketable securities and Treasury bills. Issues of notes and coin depend largely on forecast changes in consumers' expenditure at current prices. Forecasts of receipts from deposits with savings banks and from sales of national savings certificates and bonds depend largely on expected changes in the relative structure of short term interest rates. Receipts from sales of marketable securities and bills are obtained as a residual. Like any other relatively small residual item, the forecast of sales or purchases of marketable debt is necessarily subject to a wide margin of error. The forecast depends upon assumptions made about changes in government receipts and payments on both current and capital account, rates of interest, and about the balance of payments. Nevertheless, the forecasts are thought to provide a useful framework for considering monetary prospects. They are particularly important for showing the relation between forecasts of the balance of payments surplus or deficit and of how much the government might have to borrow from domestic sources, especially from the banks.

When the balance of payments is in deficit, the overseas sector generally increases its holdings of gold and currency and its financial claims on the government. In these circumstances, the government's borrowing requirement from U.K. residents, and in particular from the banking sector, would be reduced. Conversely, a forecast of an increase in the balance of payments surplus (on both current and capital account) would require an increase in government borrowing from domestic sources.

Comprehensive and reliable figures of transactions in government debt by each of the main sectors of the economy have only been available since the first quarter of 1963. These provide a basis for estimating the likely take up of debt by each of the different sectors of the economy; the take up by the banking sector in the forecast period being obtained as a residue. Forecasts of the likely course of bank deposits (which in recent years seem to be fairly closely related to changes in the national product at current prices) together with forecasts of the banks' take up of government marketable debt, provide forecasts of the liquidity of the banking system and an indication of its ability to lend to the rest of the private sector.

It should be possible, in due course, to use the "financial forecasts" to provide a "feed-back" to the constant price forecasts. For example, a financial forecast which reveals a probable shortage of finance should be a factor in determining forecasts of capital formation by companies.

The work done so far is largely experimental. It should be possible, with experience, to build up techniques of making projections of the right magnitude which are useful in formulating monetary policy. It would clearly be optimistic to expect a very high level of accuracy in these forecasts since the starting point is itself subject to a wide margin of error. The starting point is the forecast of each sector's net acquisition of financial assets or liabilities, obtained as the balancing item in the forecast capital account for each sector. The margins of error surrounding forecasts of the balance of payments current account surplus and of the Exchequer's overall deficit (which is not quite the same thing as the public sector's net acquisition of financial liabilities, but is closely related to it) are well known. One difficulty, which is unlikely to be overcome, arises from the importance, particularly in the banking and public sectors, of financial transactions with the rest of the world. However good the forecasts of the United Kingdom's own position on current account may be, there is always a possibility of large and unexpected movements in the capital account due to political or economic events in other countries, as well as in the United Kingdom itself, which can upset many of the detailed forecasts.

C'est au cours des deux dernières années seulement que les comptes nationaux publiés au Royaume-Uni ont été élargis de façon à comprendre des comptes financiers par secteur ; leur emploi à des fins d'analyse du marché n'en est donc qu'à ses débuts.

Les secteurs et sous-secteurs délimités dans les comptes financiers concordent étroitement avec ceux dont le groupe de travail sur les statistiques financières de la Conférence des Statisticiens Européens a recommandé l'adoption. Une différence importante réside dans le fait que les comptes du Royaume-Uni mettent tout particulièrement l'accent sur la distinction entre secteur public et secteur privé. C'est pourquoi le secteur public comprend non seulement l'administration centrale mais aussi les sociétés publiques non financières. La classification des actifs et des passifs est fondée sur une liste générale qui, elle aussi, est semblable à celle élaborée par la Conférence des Statisticiens Européens.

En raison de l'importance de la formation de capital dans les sociétés publiques et les collectivités locales, le secteur public emprunte normalement beaucoup au secteur privé, bien que ses besoins d'emprunts varient considérablement d'un trimestre à l'autre en raison de l'incidence variable des recettes fiscales. Les particuliers fournissent environ un tiers de l'épargne totale de l'économie, une grande partie de celle-ci prenant la forme d'épargne contractuelle par l'intermédiaire de l'assurance-vie, des caisses des retraites et du remboursement de prêts au logement. On ne dispose pas de renseignement se rapportant directement aux transactions sur les valeurs boursières effectuées par l'ensemble des

particuliers, mais ce secteur est considéré comme un gros vendeur d'obligations ; au cours de ces dernières années ses ventes se sont élevées à 700 millions de livres sterling par an.

Le taux de l'intérêt constitue un facteur important de l'analyse des comptes financiers, mais ne figure pas spécifiquement dans le système. La part de l'épargne privée utilisée dans les différents types d'avoirs à court terme a eu tendance à varier en fonction du taux d'intérêt correspondant. Le taux de l'intérêt exerce également une influence sur la structure des emprunts effectués par l'Etat.

Le Royaume-Uni prépare actuellement des prévisions à court terme du revenu national et de la balance des paiements, ainsi que des prévisions des besoins de crédit du secteur public et en particulier de l'administration centrale. A des fins internes, on établit des prévisions concernant les différentes façons dont l'administration compte financier ses besoins de crédit. Ces prévisions fournissent un cadre permettant d'étudier les perspectives monétaires et jouent un rôle très important lorsqu'il s'agit de faire ressortir les rapports entre les prévisions concernant la balance des paiements et les prévisions relatives aux emprunts de l'administration à des prêteurs nationaux notamment aux banques.