North Sea oil and gas in the UK balance of payments since 1970

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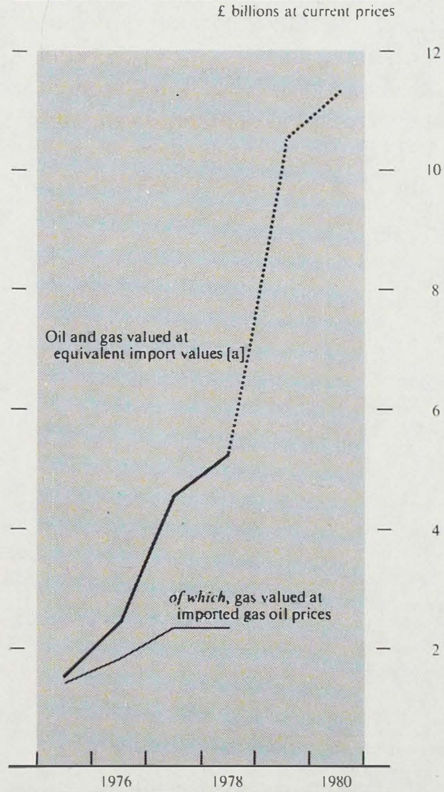
Introduction

The growing output of North Sea oil and gas[1] has now reached the point where it is having quite large structural effects on the UK balance of payments. For more than a century, the traditional composition of the current account has been a large deficit on visible trade, offset to a greater or lesser extent by a surplus on invisibles; capital flows have been more varied, at times positive and at others negative. North Sea oil and gas have had, and will continue to have, very substantial effects on all three categories of external transactions. Within visible trade, the oil deficit, which has been growing for many decades—and in recent years has been very large indeed—is now approaching balance, and, despite imports of equipment for North Sea exploration and drilling, the net benefit of North Sea oil and gas to the visible account has risen dramatically since 1975. On the other hand, the traditional surplus on invisibles is inevitably going to be somewhat diminished by the costs of servicing external borrowings for North Sea development and by the remittance of profits to foreign companies which have invested in the North Sea. There are marked effects on the capital account too: over the past five years, the financing of the North Sea programme[2] has resulted in very large inflows of capital; much of this will be repaid as production builds up.

For these reasons, it is important that the effects of North Sea oil and gas on the UK balance of payments should be looked at first as a whole. To concentrate solely on the effects on visible trade would give a very distorted picture. The latter part of this article examines the factors which need to be taken into account to interpret the United Kingdom's overall oil balance of payments in the light of North Sea development.

This article, which draws on the Bank's long involvement with the oil industry, at first mainly in connexion with exchange control and the collation of balance of payments statistics[3] and later on more general matters of external policy, describes the effects outlined above in detail, and also gives some indications of the difficulties and complexities of measurement which are involved. The wider issues of the overall economic impact of North Sea oil and gas, and the consequential indirect effects on the balance of payments lie outside its scope.

Annual value of North Sea oil and gas sales



[a] The figures for 1979 and 1980 are forecasts. The data for 1978 and the forecasts relate to oil and gas production rather than sales.

The direct impact on the balance of payments

The total identified benefit of North Sea oil and gas in balance of payments terms[4] rose from £1.7 billion in 1975 to £4.6 billion in 1978. Table A illustrates how the costs of imports of goods and services have so far been more or less offset by capital inflows. From 1979–80, however, a decline in capital inflows and a rising outflow in interest, profits and dividends (IPD), together with further imports of goods and services will offset some of the steep rise in the value of oil and gas production.

[1] The figures in this article cover the UK sector of the continental shelf, including the UK share of all fields extending across the median line. North Sea oil and gas from the Norwegian or other sectors of the continental shelf are classified as imports.
[2] See the article 'The financing of North Sea oil 1975–1980' in the March *Bulletin*, page 31.
[3] A description of the Bank's work in collecting and collating the quarterly and annual balance of payments returns submitted by oil companies is set out in the appendix to this article.
[4] For National Accounts and other related statistics such as the Central Statistical Office's balance of payments reports, gas is valued at its contract value, i.e. the price at which it is sold by the oil companies to the British Gas Corporation or to industrial consumers (see appendix).

Value of North Sea oil and gas

The major effect of North Sea oil and gas on the UK balance of payments has come from the reduction in imports, as indigenous oil and gas begin to replace fuel imports, but there are also gains from exports of crude oil and increased exports of oil products.[1] UK off-shore oil production will have risen within the period 1975–80 from virtually nil to an amount close to UK oil consumption. Between 1967 and 1978, UK off-shore gas production had similarly been built up, so that in 1978 it represented about 88% of primary gas demand.[2]

The value of UK oil production has risen steeply as production has increased, and will continue to rise for some time. The rise also reflects the steep jump in oil prices this year. The increase in the value of gas sales (calculated at the UK import price of gas oil/diesel oil—the nearest comparable imported fuel) during 1975–80 reflects mainly the change in price of gas oil. The overall value of oil and gas production increased in current terms by an average of £1.2 billion per annum between 1975 and 1978 but is expected to increase by £5.3 billion in 1979 and by £0.8 billion in 1980.

Table A

Balance of payments contribution of North Sea oil and gas

£ billions at current prices

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1 Value of oil and gas sales[a]	0.1	0.2	0.3	0.5	1.1	1.5	2.4	4.5	5.2	10.5	11.3
2 Net imports of goods and services less exports of some services directly for the programme	−0.1	−0.1	−0.1	−0.2	−0.3	−0.8	−1.2	−1.2	−0.7	−0.8	−0.8
3 Interest, profits and dividends due overseas	—	—	—	—	—	—	—	−0.4	−0.6	−1.2	−1.9
4 Net contribution to the current account	—	0.1	0.2	0.3	0.8	0.7	1.2	2.9	3.9	8.5	8.6
5 Net effect on capital account	—	—	—	0.1	0.2	1.0	1.2	1.4	0.7	1.1	0.7
6 Net identified effect on the balance for official financing	—	0.1	0.2	0.4	1.0	1.7	2.4	4.3	4.6	9.6	9.3

Sources: 1970–72: Bank of England estimates.
1973–78: *United Kingdom Balance of Payments, 1979 Edition* (the 'Pink Book'), prepared by the Central Statistical Office and published by HM Stationery Office.
1979–80: Bank of England estimates based on 'The North Sea and the UK economy', *Economic Progress Report*, HM Treasury, August 1979, where the latest official forecasts (for 1979–80 and 1985) are expressed in constant 1978 prices.

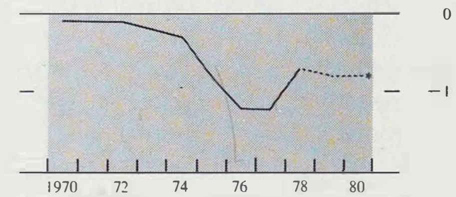
[a] Data for 1978 and Bank of England estimates for 1979 and 1980 relate to oil and gas production, rather than sales: gas sales/production have been valued throughout at the equivalent imported gas oil prices (see appendix).

Imports of goods and services

The chief balance of payments cost in the North Sea programme between 1970 and 1978 was imports of goods and services connected with exploration and development, including direct imports such as production platforms and drilling rigs, and imports of associated services comprising the hire of equipment, pipe-laying, diving and labour costs. On the other hand, there are some balance of payments credits from services provided to foreign rig operators on the UK continental shelf. Imports of goods and services reached a peak of £1.2 billion in 1976 and 1977 and fell quite sharply in 1978 to £0.7 billion. This was partly because there was a lower level of exploration drilling in that year and partly because domestic suppliers have steadily increased their share of reported off-shore supply orders from 52% in 1975 to 66% in 1978, when identified orders received by UK industry totalled some £1.0 billion. This balance of payments cost is expected to remain roughly level in 1979 and 1980. Imports of goods and services have been largely financed by capital inflows (see below).

Annual cost of net imports of goods and services identified as directly for UK continental shelf programme

£ billions at current prices



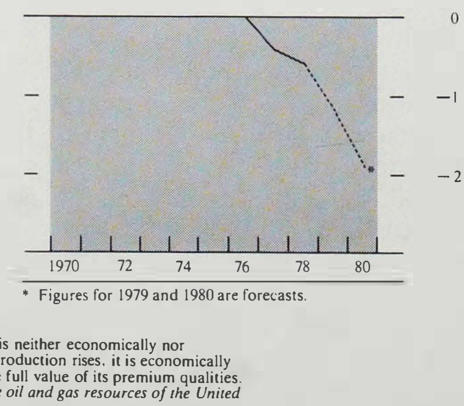
* Figures for 1979 and 1980 are forecasts.

Interest, profits and dividends (IPD)

The series of oil companies' IPD relating to the North Sea mainly consists of the net earnings of foreign companies on their North Sea investments. In 1975 and 1976, the exploration expenses of foreign oil companies operating in the North Sea, which are deducted from gross revenues in calculating profits, accounted for the negligible IPD payable abroad. The position changed in 1977 as profits were earned on the production of North Sea oil and gas, and as interest payments to overseas residents, including parent and associated companies, and to UK banks for foreign currency borrowing, increased, as a result of the heavy financing required in earlier years. The outflow of IPD rose only slightly in 1978, reflecting reduced cash flow because of delays in development and difficulties in production. Profits

Annual outflow of interest, profits and dividends arising from UK continental shelf programme

£ billions at current prices



* Figures for 1979 and 1980 are forecasts.

[1] North Sea oil consists mainly of light low sulphur crudes. Given the pattern of UK demand, it is neither economically nor technically sensible to use only North Sea oil in UK refineries. Thus, as UK continental shelf production rises, it is economically desirable to export increasing quantities of North Sea oil to markets where it can command the full value of its premium qualities. In 1978, approximately 44% of North Sea oil production was exported, see *Development of the oil and gas resources of the United Kingdom 1979* prepared by the Department of Energy and published by HM Stationery Office.

[2] In 1978, imports of Norwegian gas accounted for 7½% of UK gas consumption. Depending upon the exact availability of further imports of Norwegian gas to meet part of UK demand, indigenous production is expected to increase gradually until the mid-1980s.

earned by UK subsidiaries of foreign companies were also depressed by the lower sterling oil price, and by the higher provisions for petroleum revenue tax.

In 1979 and 1980, the outflow of IPD is expected to rise sharply, as the build-up in oil production and the rise in the sterling oil price in 1979 increase net earnings in the North Sea, and in the next few years IPD will become the largest offset to the contribution of the North Sea to the current account.

Net contribution to the current account

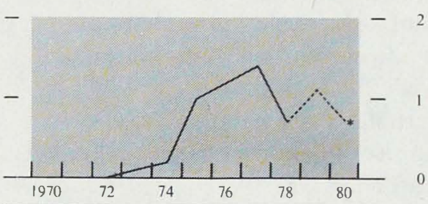
North Sea oil and gas production contributed an estimated £3.9 billion net to the UK current balance in 1978, more than five times the contribution in 1975. In 1978, imports of goods and services directly for North Sea development are estimated to have been around £0.7 billion. In 1979 and 1980, the deficit on trade in oil will fall, but by this time the improvement will be offset to some extent by increasing payments of interest and profits to foreign oil companies.

Capital account

The impact of North Sea development on the capital account so far mainly reflects inflows of funds from overseas to finance the purchase and installation of equipment, and includes profit retained in the United Kingdom by foreign oil companies; this latter element is expected to become proportionately more important in future.[1] In 1975 and 1976, the annual capital account benefit of the programme was £1.0 billion and £1.2 billion respectively, as the UK subsidiaries of foreign companies, largely in the United States, financed their capital expenditure programmes by borrowing from parent and associated companies, and by long-term loans from other overseas residents and in the euro-dollar market. In these years, between a quarter and a third of the capital inflow was provided by foreign currency loans from banks in the United Kingdom. In 1977, while injections of loan capital remained high, there was a considerable element of more permanent capital as some foreign parent companies increased the share capital of their UK subsidiaries. As a result, a large positive contribution continued, supplemented by currency borrowings by UK-owned companies, including the $825 million overseas financing arranged by British National Oil Corporation covered by forward sales of oil. In 1978, a lower level of net inward investment in the North Sea reflected repayments of earlier foreign currency borrowing (including the early repayment of a $150 million euro-dollar loan by British National Oil Corporation, originally scheduled to be repaid at the end of 1981), and of inter-company loans from companies' earnings generated in the North Sea. The volume of total capital expenditure by non-UK companies remained broadly constant in 1978. By 1981, the North Sea capital account is expected to move into deficit, largely reflecting higher debt repayments from fields in production; these repayments are expected to outweigh the additional demand for capital from new and existing fields.

Annual net inflow on capital account associated with UK continental shelf programme

£ billions at current prices



* Figures for 1979 and 1980 are forecasts.

Definition problems

The adjusted value of North Sea production of oil and gas, as explained above, is useful as an indicator of its identified contribution to the balance of payments. But it cannot necessarily be assumed, as Table A implicitly does, that, in the absence of North Sea oil and gas, the level of UK energy demand and the supply of fuels other than oil and gas would have been unchanged. Similarly, it cannot be assumed that, in the absence of North Sea oil and gas, the non-oil balance of payments would have developed as it has.

Hitherto, the total value or benefit of North Sea oil and gas has been expressed as a joint figure. There are good reasons for doing this, notably because many of the transactions cannot be allocated separately between oil and gas, particularly now that an increasing number of fields are producing both oil and associated gas from the same production facilities. When, however, one turns to the actual transactions being recorded month-by-month and quarter-by-quarter in the balance of payments accounts, it is possible, at least for some major categories, to draw such distinctions.

The adjusted oil balance

The remainder of this article examines the part played by North Sea transactions in the balance of payments accounts. On the trade account, at least, a clear distinction between oil and gas can be drawn. All UK continental shelf gas and that part of North Sea oil production consumed at home is, of course, classified as indigenous energy and does not therefore feature in the balance of payments. All that is recorded in the trade statistics are oil exports and imports, small quantities of liquefied natural gas imported from Algeria, and, from 1978 (when it was worth £0.2 billion), imports of Norwegian natural gas, together with those identified imports of goods and equipment associated with the North Sea oil and gas development programme. Of

[1] The preponderance of US dollar financing by foreign companies partly reflected official policy of attracting external capital for the North Sea and, for at least part of the period under review, UK exchange control rules which limited the amount of domestic sterling finance that could be raised by non-UK participants (other than EEC and former sterling area companies) towards their capital costs. Additionally, however, there were, and are, other, mainly commercial, factors bearing upon financing methods, such as international pricing of oil in dollars (particularly following the gradual move by OPEC in the early 1970s towards dollar payments for all their oil) and a consequent desire to minimise currency exposure. The exchange control rules were relaxed in 1977 to permit all non-resident participants access to sterling financing to finance all their North Sea costs (including exploration) but, although some modest use appears to have been made of this concession in 1978, domestic sterling (including that borrowed by resident companies) still accounts for little more than a tenth of the total outstanding off-shore financing requirement.

these items, oil imports (11.6% of total imports in 1978) and oil exports (6.3% of total exports) are very important components of the trade account, and the monitoring of the oil import/export balance has, at least since 1973, been a prerequisite for all regular assessments of the trade account.

The steady rise in indigenous energy production from 48.3% of UK needs in 1970 to 80% in 1978 (see Table B) should have meant a sharp fall in the share of energy in the overall UK trade account over this period. In value terms, however, this declining physical dependence on external energy resources has been masked by the steep rises in energy prices, notably in 1973-74 and again in 1979.

Table B
UK indigenous energy production

Percentage of primary fuel consumption [a]

	1970	1975	1976	1977	1978
Coal	40.5	37.1	35.1	34.0	34.3
Petroleum	—	0.8	5.8	18.1	25.4
Natural gas	4.5	15.6	16.2	16.7	16.0
Nuclear energy and hydro-electricity	3.3	3.7	4.2	4.5	4.3
Total indigenous energy production	**48.3**	**57.2**	**61.3**	**73.3**	**80.0**

Source: *Digest of United Kingdom Energy Statistics*. (prepared by the Department of Energy and published by HM Stationery Office).

[a] Includes oil and gas for non-energy uses and marine bunkers.

Table C
External balance in crude oil and related UK continental shelf transactions[a]

£ billions at current prices; figures may not add to totals due to rounding

	1970	1971	1972	1973	1974	1975	1976	1977	1978
1 Imports of crude oil	−0.5	−0.7	−0.7	−0.9	−3.3	−3.1	−4.1	−3.7	−3.3
2 Exports of crude oil	—	—	—	—	—	—	0.2	0.9	1.2
3 Balance of trade in crude oil	−0.5	−0.7	−0.6	−0.9	−3.3	−3.0	−3.9	−2.8	−2.0
4 UK continental shelf net imports of goods and services less exports of some services directly for the programme[b]	−0.1	−0.1	−0.1	−0.2	−0.3	−0.8	−1.2	−1.2	−0.7
5 UK continental shelf IPD due overseas[c]	—	—	—	—	—	—	—	−0.4	−0.6
6 Current account effect	−0.6	−0.8	−0.7	−1.1	−3.6	−3.8	−5.1	−4.4	−3.3
7 Capital account effect[d]	—	—	—	0.1	0.2	1.0	1.2	1.4	0.7
8 Adjusted oil balance	−0.6	−0.8	−0.7	−1.0	−3.4	−2.8	−3.9	−3.0	−2.6

Sources: 1970-78 data for imports and exports of crude oil and the balance of trade in crude oil: *Monthly Review of External Trade Statistics*, Departments of Industry, Trade and Prices and Consumer Protection—Common Services, and Bank of England estimates (see footnotes to Tables A and C).

[a] This table relates the crude oil balance to other balance of payments movements connected with UK continental shelf exploration, development and production of oil and gas combined. No attempt has been made to identify the contribution of oil and gas separately in UK continental shelf transactions. It does not take account of any on-shore oil activity with current or capital account effects on the balance of payments. In addition, there were quite small imports of Algerian gas through the period, and in 1978, when gas flowed from the Norwegian side of the Frigg field, imports of Norwegian gas were identified at £0.2 billion.

[b] Table A, item 2.

[c] Table A, item 3.

[d] Table A, item 5.

Yet the oil balance is only part of the story in terms of the part played by oil and gas in the balance of payments. The development of North Sea oil and gas has only been achieved by drawing heavily on external resources. We need therefore to adjust the oil balance, as indicated in Table C, by those identifiable elements of imports of goods and services, interest, profits and dividends and capital flows associated with the production of North Sea oil and gas, which were used in Table A.

The figures emphasise that, whereas the various North Sea development elements more or less cancelled out in 1970-74, they have represented since then a substantial and growing adjustment to the oil balance. The oil balance, thus adjusted, will therefore almost certainly still be in substantial deficit next year. Even if the United Kingdom attains oil self-sufficiency in volume terms early in the 1980s, the adjusted oil balance is likely to remain in deficit well into that decade.

Oil and gas within the overall UK balance of payments

The oil balance and adjustments described above give a useful tool for assessment of the part played by oil and gas within the overall UK balance of payments (See Table D).

Table D
The oil import/export balance and related UK continental shelf transactions in the overall balance of payments[a]

£ billions at current prices; figures may not add to totals due to rounding

	1970	1971	1972	1973	1974	1975	1976	1977	1978
1 Visible trade	**—**	**0.3**	**−0.7**	**−2.4**	**−5.2**	**−3.2**	**−3.6**	**−1.7**	**−1.2**
Oil[b]	−0.5	−0.7	−0.7	−0.9	−3.4	−3.1	−4.0	−2.8	−2.0
Imports of goods for UK continental shelf	−0.1	−0.1	−0.1	−0.1	−0.1	−0.3	−0.5	−0.5	−0.2
Non-oil	0.6	1.1	0.1	−1.4	−1.7	0.2	0.9	1.6	1.0
2 Invisibles	**0.8**	**0.9**	**0.9**	**1-5**	**1.9**	**1.6**	**2.8**	**2.0**	**2.2**
Oil IPD[c]	—	—	—	—	—	—	—	−0.4	−0.6
Imports of services for UK continental shelf	—	—	—	−0.1	−0.2	−0.5	−0.7	−0.7	−0.5
Non-oil	0.8	0.9	0.9	1.6	2.1	2.1	3.5	3.1	3.3
3 Current account	**0.8**	**1.2**	**0.2**	**−0.9**	**−3.3**	**−1.6**	**−0.8**	**0.3**	**1.0**
Oil[d]	−0.6	−0.8	−0.7	−1.1	−3.6	−3.8	−5.1	−4.4	−3.3
Non-oil	1.4	2.0	0.9	0.2	0.3	2.2	4.3	4.7	4.3
4 Capital account[a]	**0.5**	**1.8**	**−0.7**	**0.1**	**1.6**	**0.1**	**−3.0**	**4.4**	**−2.9**
Oil[e]	—	—	—	0.1	0.2	1.0	1.2	1.4	0.7
Non-oil	0.5	1.8	−0.7	—	1.4	−0.9	−4.2	3.0	−3.6
5 Overall current and capital account[a]	**1.3**	**2.9**	**−0.5**	**−0.7**	**−1.7**	**−1.5**	**−3.9**	4.7	−1.9
Oil[f]	−0.6	−0.8	−0.7	−1.0	−3.4	−2.8	−3.9	−3.0	−2.6
Non-oil	1.9	3.7	0.2	0.3	1.7	1.3	—	7.7	0.7

Sources: *United Kingdom balance of payments, 1979 Edition* (the 'Pink Book'), prepared by the Central Statistical Office and published by HM Stationery Office, and Bank of England estimates (see footnotes below and to Tables A and C).

[a] Capital account balance excludes unidentified 'balancing item' and capital transfers.

[b] Table C, item 3, plus the (negligible) balance of trade in petroleum products.

[c] Table C, item 5.

[d] Table C, item 6.

[e] Table C, item 7.

[f] Table C, item 8.

The worsening of the United Kingdom's visible trade balance in 1973 and 1974 was much influenced by the increases in world commodity prices, especially oil prices. The swing in the balance of foreign trade in goods from a deficit of £5.2 billion in 1974 to a deficit of £1.2 billion in 1978 reflected the decline in net oil imports (£1.4 billion), but there was a much larger improvement of £2.7 billion in the balance of non-oil trade between 1974 and 1978. The improvement in the visible oil balance has been most marked since 1976, despite the recent sharp upward movement of the oil price which was partly offset by the strengthening of sterling.[1] In 1976, the surplus on invisibles improved sharply, but was insufficient to offset the deficit on

[1] The North Sea oil price in current terms in dollars had risen on 1st July 1979 by over 80% since end-1976, whereas in sterling terms the price increase was 45%.

visible trade. In 1977 and 1978, current account surpluses resulted from the steady improvement of the visible oil account which compensated for the deterioration of the invisibles surplus. In several years of the period under review, there were also net capital inflows, partly to finance North Sea development. Taking the current and capital accounts (excluding the unidentified 'balancing item') together, one of the most significant features has been the improvement in the oil balance since 1976. Nevertheless, as adjusted for other oil and gas-related transactions, oil and gas are, on current projections, likely to remain a net deficit item in the overall balance of payments at least until the mid-1980s.

Appendix

Sources and methodology

Introduction

Regular balance of payments statistics for the oil sector have been compiled by the Bank of England, on behalf of the Government, since 1940. In 1970, the ten leading foreign oil companies were asked to complete, in addition, an annual return relating solely to their operations on the UK continental shelf (UKCS) as distinct from funds designated for their mainland activities of refining and marketing. At the same time, detailed statistical reporting on the North Sea had been agreed with British Petroleum (BP) and Shell. The number of reporting foreign companies is now fifty-five, and a total of six UK companies complete equivalent questionnaires or supply compatible material in a separate form. As from the first quarter of 1978, all oil companies involved in fields under development in the North Sea have been asked to submit quarterly figures as well.

UK oil and gas balance of payments

The oil industry affects the UK balance of payments accounts in the following areas:

Visible trade

Imports and exports of crude oil, oil products, gas and chemicals.[1]

Imports of tankers (and exports of second-hand tankers).[1]

Imports of equipment, particularly for the development of the UKCS.[2]

Invisibles

Expenses and earnings abroad of oil companies' and independent operators' tanker fleets. The quarterly and annual data are on the same basis as statistics collected by the General Council of British Shipping which form part of its inquiry covering the contribution of the UK shipping industry to the balance of payments.

Imports of services relating to the development of the UKCS.[3]

Exports of certain services directly associated with UKCS oil and gas production.[3]

Interest, profits and dividends (IPD) accruing—irrespective of whether they have been paid or not—to UK residents from non-residents (IPD credits) or payable overseas by UK residents (IPD debits). IPD due abroad, in respect of the UKCS programme, include three separately distinguishable series:

IPD of the UK subsidiaries of foreign-owned companies, including the 60% Dutch share of the Shell Group.

Interest paid on borrowing in foreign currencies from banks in the United Kingdom for North Sea development.

Interest paid by public corporations on their overseas borrowing for North Sea development.

Capital account

Investment in the United Kingdom by foreign-owned companies, including the 60% Dutch share of the Shell Group,

Borrowing in foreign currencies from banks in the United Kingdom, net of repayments, for North Sea development.

Overseas borrowing by UK public corporations for North Sea development.

Investment outside the United Kingdom by UK companies including, where appropriate, investment by UK subsidiaries of foreign companies.

Borrowing in foreign currencies from banks in the United Kingdom by oil companies for investment overseas.

Methodology

The quarterly and annual returns are designed to throw light on company remittances of IPD, and on all forms of capital flows. The aggregation of the UKCS oil statistics collected and collated by the Bank for publication by the Central Statistical Office (CSO)[4] makes a number of important assumptions:

The CSO presentation shows only the readily identifiable transactions associated with the UKCS programme. It makes no attempt to cover such indirect effects as the impact of UKCS oil and gas activity and revenue on the exchange rate, on the official reserves or on the earnings of the official reserves; nor does it measure imports/exports displaced by the UKCS programme. In a wider context, no account is taken of the indirect effect of North Sea oil and gas imports and exports on the non-oil sector of the UK economy and thus on economic activity in general.

Inputs are at cost. Therefore the value of UKCS gas recorded is the total contract value as paid to the production companies on delivery and not its value as an imported oil equivalent as used in published Treasury forecasts and in estimates used earlier in this article (see Table A and the chart on page 283). The UKCS annual gas values in the CSO 'Pink Book' show only a slowly rising trend (see Table E).

Table E
Value of oil and gas sales

£ billions at current prices

	1973	1974	1975	1976	1977	1978
Gas[a]	0.1	0.2	0.2	0.3	0.3	0.4
Oil	—	—	0.1	0.6	2.2	2.8

Source: *United Kingdom Balance of Payments, 1979 Edition*, (the 'Pink Book') prepared by the Central Statistical Office and published by HM Stationery Office.

[a] Valued at contract prices. Based on an oil equivalent price the value in 1978 would have been about £2–2¼ billion.

Not all direct effects are fully identifiable. In particular, only those goods imported with specific nomination for North Sea use are included in the CSO figures. On the other hand, it has not been possible to exclude the UK export content of certain large imports. For example, modules have been exported for inclusion on certain platforms that have been assembled overseas and later imported, and the full value of these imports has then been included. In these cases, this presentation overstates the offsetting effects of imported goods.

Forecasts

The data described above are used by the Bank of England as the basis for its contribution to official forecasts of the oil and gas-related sectors of the balance of payments. A feature of forecasts of North Sea IPD and capital account is that the estimates are based on the loan and capital arrangements for North Sea development, where the scale, terms and maturities of the financing are known.

The following list of the sources and uses of non-UK company funds is used to compile the forecasts:

Sources of funds:

profits = gross revenue less operating costs less royalty (net of depreciation and accrued tax)—obtained from the Government North Sea model;

depreciation provisions—calculated on a unit of production basis by the Bank of England;

accrued tax provisions—calculated on a unit of production basis by the Bank of England;

borrowing—sterling
borrowing—euro-dollars
borrowing—overseas

} Bank of England estimates.

[1] The primary source of information is HM Customs and Excise.

[2] Based on returns by the oil companies to the Business Statistics Office and the Department of Energy, and on information from HM Customs and Excise.

[3] Official estimates of services imports and exports associated with UKCS activities are made from material collected by the Business Statistics Office and the Department of Energy.

[4] *United Kingdom Balance of Payments, 1979 Edition* (the 'Pink Book'), prepared by the Central Statistical Office (CSO) and published by HM Stationery Office, and the quarterly balance of payments article prepared by the CSO and issued as a press notice, and subsequently published by HM Stationery Office in *Economic Trends*.

Uses of funds:

UKCS capital expenditure—actual and forecast data provided by the oil companies to the Bank of England, the Business Statistics Office and the Department of Energy;

working capital/trade credit—Bank of England estimated proportion of revenue flows;

interest—sterling
interest—euro-dollars
interest—overseas
} Bank of England estimates. Appropriate interest rate applied to level of outstanding borrowing;

tax payments (corporation tax and petroleum revenue tax)—Government North Sea model;

repayments—sterling
repayments—euro-dollars
repayments—overseas
} Bank of England estimates based on companies' cash flow position (Government North Sea model) and known repayment schedules;

short-term assets held in United Kingdom = estimates of tax reserves (excess of accruals over payments)—Bank of England estimates;

dividends—Bank of England estimates.

From the above figures, IPD payable overseas are calculated by deducting from profits net of depreciation and accrued tax any interest on sterling or euro-dollar borrowing; and an inward investment figure is calculated by taking overseas borrowing net of repayments and adding the overseas parents' share of the interest and the unremitted profits of the subsidiary or associated company.

Equivalent figures, where relevant, are also calculated separately for BP, Shell and the other UK oil companies; 60% of the Shell figures, representing the Dutch share in Shell, is then attributed to the non-resident company totals and 40% to the UK company totals. The UK returns are analysed along similar lines to prepare forecasts of overseas investment flows making agreed assumptions about the companies' overseas earnings and about their investment plans in the United Kingdom and elsewhere. An estimate of IPD credits is based largely on agreed projections of current overseas earnings.