

Trends in real rates of return

This article⁽¹⁾ discusses the concept of the rate of return on capital employed and shows how it can be calculated. It highlights some of the problems that are likely to be encountered in calculating and interpreting such measures in the United Kingdom. The analysis is then extended to cross-country comparisons of rates of return, and finally some updated estimates are presented for series calculated by the OECD. These suggest that in the post-1980 period the improvement in corporate profitability (on all measures) has been significantly more marked in the United Kingdom than in any of the other G7 economies. Indeed, it may have been sufficient to raise UK company profitability from around the lowest in the group to above the average.

Introduction

Why are rates of return important in an economic context? From the viewpoint of an individual firm faced with an investment opportunity it is important to know if the project will yield a rate of return in excess of the cost of capital. The object of calculating a rate of return on capital employed in a project is to compare it with a measure of the opportunity cost of that capital in order to assess the project's desirability. Underlying rate of return calculations is the view that changes in such rates are a guide to changes in the incentive to invest in the economy.

From the firm's point of view, the relevant concept of profit for undertaking any new project is the future expected after-tax profit. However, this is not directly observable. What may be observed are *ex-post* rather than *ex-ante* profits: firms publish accounts which contain such information and aggregate profitability data are available in the national accounts. However, the limitations of such data are acute: first they can make no allowance for expectations, and second they refer to all activities, rather than individual projects. The question is, are the limitations too acute for these profit measures to be of any value economically? Recorded *ex-post* profits and rates of return are not the concept of profit which drives a firm's investment decisions. However, they are important for a number of reasons. First, for the firm, they provide a check on profitability and may allow an assessment of a project's performance compared with expectations. Furthermore, in the absence of observable evidence on *ex-ante* profits, current profits may be taken as a guide to expected future profits, and hence current rates of return may give some indication of future returns. Finally, a large proportion of investment is financed through retained earnings and *ex-post* profits are important as a source of finance.

For the economy as a whole, *ex-post* rates of return provide some indication of, among other things, the

efficiency of utilisation of the capital stock and the return to physical investment. Thus they may also provide useful indications about future economic activity and investment.

Defining the rate of return

In general terms, a rate of return is defined as the ratio of profits to capital employed. There are of course many ways in which both profits and capital employed can be defined and the definition of these determines how the measure should be interpreted.

The first choice is whether the return should be measured gross or net (with the difference accounted for by depreciation or capital consumption⁽²⁾). It may be argued that the depreciation in value of a capital good that takes place in an accounting period due to 'wear and tear' and obsolescence is a cost of production which should be deducted along with all other production costs before arriving at a 'net' profit figure. Of course, when profits are calculated net of depreciation, they should be divided by capital stock figures which are also net of cumulative depreciation. If the point at issue is the profitability of operations, then an appropriate definition of profits would be the operating surplus, which is defined as the profit generated by engaging in the production of goods and services, and is equivalent to the value added when inputs are transformed into output, less compensation to employees. The operating surplus needs to be distinguished from holding gains, which are also profits, but occur when an asset is bought, held and resold, and which would only be included in the definition of profits if the purpose of the investigation were to assess returns on a comprehensive basis.

Chan-Lee and Sutch⁽³⁾ have argued that real holding gains were of considerable importance in the 1970s. Inflation, and especially changes in the rate of inflation, appear to have been responsible for changes in the actual as well as

(1) Written by T S Callen and A Convey in the Bank's Economics Division. The authors are grateful to the Department of Trade and Industry for comments on the technical aspects of the article.

(2) Strictly these do not mean the same thing, but in this article they are used synonymously.

(3) Chan-Lee, J and Sutch, H 'Profit and rates of return', *OECD Economic Studies*, Autumn, 1985.

the measured behaviour of profits and rates of return through associated changes in interest rates and the revaluation of assets and liabilities.

Ideally, a further adjustment is required to arrive at a rate of return that may be considered close to the criteria that influence investment decisions. This is the tax adjustment of profit flows and capital employed.⁽¹⁾ To avoid the complications caused by tax adjustments, all rates of return presented in this article are pre-tax.

How should capital employed be defined? At a minimum, capital employed should include plant, equipment and stocks; stocks need to be held to ensure the smooth running of the production process. Land used in the production process (for example, if a factory is built on it, but not if it is being held for speculative motives) and non-interest-bearing financial assets (which may be kept for a precautionary reason associated with the operation) could also be included. With land prices escalating, the inclusion of land in the denominator while holding gains are excluded from the numerator would significantly reduce the measured rate of return.

In calculating the gross capital stock it is assumed that the original value of the asset remains intact until it is retired, whereas when estimating the net capital stock the value of the asset is assumed to decline over its service life.

Table A
Alternative measures of the rate of return

Denominator	Numerator			
	Operating surplus		Operating surplus plus holding gains	
	Gross	Net	Gross	Net
Gross capital stock	Gross return on productive activity		Gross return on 'all' activity	
Net capital stock		Net return on productive activity		Net return on 'all' activity

Measurement of the capital stock is complicated by the desirability of using current cost rather than historic cost data. Historic cost accounts value the resources used in the production process at the prices at which they were originally purchased. In the same way, historic cost depreciation is calculated in relation to the original purchase price of the physical assets. However, historic cost accounts provide no indication of the efficiency with which a firm is undertaking its activities since they give no guidance as to the current value of the resources that the firm is employing. The rate of return based on the valuation of the capital stock at historic cost will be a poor guide to the likely rate of return on newly acquired similar capital, which would have been bought at much higher prices. Current assets should be valued at current cost. If measuring capital stock at current cost, capital also needs to be depreciated at current cost. With positive inflation,

the historic cost rate of return is generally higher than the current cost rate for two reasons: profits at historic cost include nominal holding gains, whereas current cost profits include only real gains; and the value of the capital stock in the denominator of the ratio is artificially low because it includes capital goods valued at prices prevailing in earlier years.

Data problems in the United Kingdom

Measurement of the capital stock

In the UK national accounts the gross capital stock is estimated by the perpetual inventory method (PIM). For the calculation to be carried out, two sets of data are required: annual gross capital formation and an estimate of the average length of asset lives. The PIM can be summarised as follows: to make an estimate of the capital stock in year n , when the asset life is L years, fixed capital formation is estimated for the L years prior to year n . An appropriate price deflator is applied to the estimates. They are then aggregated for the L years to obtain an estimate of the gross capital stock in year n :

$$GCS_n = \sum_{i=1}^L (FCF_i / P_i)$$

where GCS_n = gross capital stock at constant (year 1) prices in year n

FCF_i = fixed capital formation in year i at current prices

P_i = price deflator in year i

L = length of asset life

Then the price index can be applied to GCS_n to obtain an estimate in current prices. To calculate gross capital stock in year $n+1$ fixed capital formation in year n is added to gross capital stock in year n and retirements in year n are subtracted. Retirements in year n will equal fixed capital formation in year $n-L$.

The length of asset lives assumed in company accounts is thought to be about half those assumed in the national accounts. If the asset lives assumed in the national accounts are indeed too long then depreciation will be understated and capital stock overstated. It can be shown that as long as gross profits exceed gross investment the net effect will be for the measured rate of return to fall short of the true rate of return. Indeed, there is a large discrepancy between rates of return calculated from national accounts and those derived from company accounts data. However, this is due not only to differences in asset life assumptions, but also to differences in data coverage. This discrepancy was reconciled in a recent article in *Economic Trends*.⁽²⁾ Simulations carried out by the CSO on their perpetual inventory model assuming asset lives of half those used in the construction of national accounts leads to an increase in the net real

(1) See 'Trends in company profitability', in the March 1976 *Bulletin*, pages 36-52.

(2) 'Industrial and Commercial Companies' Real Rates of Return: Differences between Figures derived from National Accounts and Company Accounts', *Economic Trends*, August 1984.

pre-tax rate of return of between 0.2% and 3.3%. The discrepancy varies between years and depends on the level of the rate of return, the rate of inflation and the profile of past investment.

Smith⁽¹⁾ has argued that there is strong evidence that in the late 1970s and early 1980s the rates of scrapping (especially in the manufacturing sector) were exceptionally high, owing mainly to the perceived need for greater efficiency, highlighted by the 1973 and 1979 energy price shocks, together with high levels of import penetration and slow (or negative) growth. There may also be changes over time in service lives, eg if the pace of technological change quickens.

Smith estimates capital stock figures (for divisions 1–8 of the SIC classification) directly from companies' current cost accounts. The results for the gross capital stock at the end of 1983 suggest that the PIM-based estimates overstate the level of the stock by about one quarter. These estimates are rather higher than those presented by Wadhvani and Wall⁽²⁾ who estimate that between 1979 and 1982 the capital stock fell by 1.6%, rather than rising by 2.25% as the CSO estimate. However, they do find that there are significant year-to-year variations in the degree of mis-measurement of the capital stock. The reliability of the estimates given by the CSO varies between sector: while estimates for the manufacturing sector are graded as B (errors of 3%–10%), many sectors are graded as C (errors of 10%–20%) or D (errors of more than 20%).

Capital consumption

The two most common ways of calculating depreciation are the 'straight line' method (as used in the national accounts) and the 'reducing balance' method. The former assumes that the asset depreciates by a constant amount in each year of its finite life, while the latter assumes that depreciation each year is a constant proportion of the written-down value at the beginning of the year. In theory, such a method will lead to an infinite assumed asset life. However, in practice, the asset is assumed to have a finite life, with any remaining value wiped out in the year of retirement: hence the proposition that a constant proportion is written off in each year is not strictly true. Again the assumption as to the length of asset life is crucial, as a shorter assumed life will mean higher depreciation in each period of the asset's life. Even if asset life assumptions are correct, however, it is unlikely that straight-line depreciation will accurately reflect true depreciation: given that the rate of depreciation is likely to increase as the asset gets older, straight-line depreciation is liable to write off the value of the capital good too fast. However, it should be noted that the reducing balance method will write off the value of the capital good even faster for the same assumed asset life. The reliability of the depreciation estimates is graded as class C by the CSO.

Notional cross-country differences in construction of national accounts

The PIM is the standard method of estimating capital stocks in national accounts. However, despite the common method used and reasonably accurate data available in most countries on gross fixed capital formation, the different assumptions made about service lives may mean that different countries' capital stock estimates are not entirely comparable. The service lives of equipment in different sectors of the economy obviously differ, but this is unlikely to account for the differences in the figures presented in Chan-Lee and Sutch for assumed average service lives used in calculating capital stock estimates in the manufacturing sector. These are given for the seven major industrial countries (the G7) in Table B.

Table B
Service life of equipment in manufacturing^(a)

	Years
United States	18
Japan	11
Germany	23
France	17
United Kingdom	28
Italy	17
Canada	23

(a) Average assumed service life of machinery and equipment (excluding vehicles) in manufacturing activities.

As can be seen, Canada, Germany and the United Kingdom have relatively long assumed asset lives, while those assumed in Japan are much shorter. It is quite possible that similar equipment has a different life in one country than in another: the life of equipment is sensitive to changes in the relative costs of labour and capital and to technical progress, so that in a fast growing economy like Japan it is not surprising that equipment is replaced more quickly. But such large differences are hard to credit. These differences in assumption will obviously lead to problems in comparing rates of return across countries.

Differences in the thoroughness and methods of collection of profits data may also lead to cross-country inconsistencies. Another problem is caused by the varying amount of self-employment in the seven countries. Income from self-employment is composed of two elements: a return to capital invested and a return to labour. Only the return to capital should be included in an estimate of operating surplus, but in OECD estimates all income from self-employment is included. This biases upwards estimates of operating surpluses and this bias is increased as the degree of self-employment in a country increases. Japan and Italy both have high levels of self-employment.

It might be argued that using a gross rate of return to make cross-country comparisons will reduce the problems caused by different asset life assumptions in different countries as it eliminates the need for capital consumption estimates. However, this does not solve all

(1) Smith, A 'A Current Cost Accounting Measure of Britain's Stock of Equipment', *National Institute Economic Review*, May 1987.

(2) Wadhvani, S and Wall, M. *The UK Capital Stock—New Estimates of Premature Scrapping*, Centre for Labour Economics, London School of Economics, Discussion Paper No 245.

the problems as the gross capital stock is still affected by the assumed asset lives because of scrapping. Also, as noted above, capital consumption is a cost of production and should preferably be included in the calculation. Estimates of both gross and net rates are therefore presented here, with discrepancies between the two highlighting the treatment of capital consumption. It should be noted that because of the problems inherent in the data, comparisons of the actual levels of the rate of return may be misleading and the pattern over time is likely to be more informative.

UK estimates

This section discusses the definition of the rate of return as calculated by the Department of Trade and Industry and as used in the Bank of England's economic model. The measure discussed is the net pre-tax rate of return for all industrial and commercial companies (ICCs). It is a current cost measure which adjusts both profits and the capital stock for the effects of inflation. Gross trading profits of all ICCs are adjusted for stock appreciation and capital consumption at replacement cost. ICCs' income from rent is also included in the measure of profit. There is, therefore, a small bias in the figures as the rental income from land is included in the numerator of the ratio but the land itself is excluded from the denominator of the ratio. Capital employed is defined as the sum of net capital stock at replacement cost and the book value of stocks. The average capital employed over the year is estimated by the mean of the start and end-year levels. The estimates obtained are presented in Table C.⁽¹⁾

Table C
Estimates of UK industrial and commercial companies' pre-tax rate of return

Per cent

1973	1975	1980	1981	1982	1983	1984	1985	1986	1987(a)
8.9	4.0	6.4	6.2	7.5	9.1	10.7	11.4	10.0	11.5

(a) Provisional.

International comparisons⁽²⁾

National accounts questionnaires are returned annually to the OECD by each of its member states, and this data source can be used to make some cross-country comparisons of rates of return. However, because of the limited amount of data available that covers all non-financial businesses the estimates presented here are only for the production industries plus transport and communication. Although this is an industry-based definition, it excludes agriculture and finance, where profits are mainly a return on land and financial assets respectively; distribution, which has a high concentration of unincorporated businesses; and government services, which do not earn an operating surplus. This definition therefore provides a rough approximation of non-financial corporations. In addition, the estimates

of capital employed exclude stocks as well as land. These estimates of rates of return are published by the OECD⁽³⁾ and also by the Department of Trade and Industry.⁽⁴⁾ In the following analysis some recent data have been estimated using Bank of England information and forecasts.

In analysing changes in the rate of return it is useful to decompose it into the ratio of the operating surplus to value added and the ratio of value added to the capital stock. To calculate these measures of profitability, three variables are used: the operating surplus P , value added Y and the capital stock K . These are related through the identity

$$\frac{P}{K} \equiv \frac{P}{Y} \cdot \frac{Y}{K}$$

The rate of return on capital employed is thus identical to the share of the operating surplus in value added multiplied by the ratio of value added to the capital stock (or the output/capital ratio, referred to henceforth as capital productivity). This identity is useful in the interpretation of the data collected. For example, if a country experiences a relatively high rate of return, it can be determined to what extent this is owing to a relatively high share of profits or to a relatively high capital productivity. The rate of growth and productivity of the capital stock has an overwhelming influence on economic performance. It should be noted that capital productivity is dependent on both employment and the productivity of labour as well as the efficiency of the capital stock, as an increase in labour productivity or employment will increase the value added for any given capital stock, and hence capital productivity will increase.

The gross operating surplus (P) of an enterprise or producer unit is equal to its value added minus compensation of employees and indirect taxes paid by the producer (less subsidies received). Value added (Y) is defined as gross output at producers' values minus intermediate consumption at purchasers' values. The capital stock (K) is as defined above.

Table D
Profit shares

Gross operating surplus as a percentage of gross value added

	1973	1975	1980	1981	1982	1983	1984	1985	1986	1987
United States	30.2	32.7	32.1	33.0	32.6	34.6	35.9	35.6	35.5	35.6
United Kingdom	31.2	23.9	31.8	33.5	36.6	39.5	41.0	41.9	39.5	42.5
Japan	46.7	39.6	42.0	41.1	40.1	38.8	40.2	40.4	40.6	40.8
Germany	32.7	31.0	30.2	29.3	30.4	32.8	33.3	34.1	35.1	35.4
France	35.1	31.2	32.4	31.5	30.9	31.3	32.2	32.9	34.4	35.3
Italy	34.1	30.6	39.0	37.4	37.5	36.5	40.2	40.6	42.1	42.1
Canada	37.9	36.8	41.0	38.7	37.7	41.9	44.7	44.7	44.9	46.5

Net operating surplus as a percentage of net value added

	1973	1975	1980	1981	1982	1983	1984	1985	1986	1987
United States	22.0	22.7	21.2	21.4	19.4	22.5	25.2	25.0	24.9	24.9
United Kingdom	21.8	11.5	19.5	20.9	25.0	28.7	30.5	32.0	28.5	32.8
Germany	24.1	20.7	20.2	18.7	19.7	22.5	23.0	24.1	25.4	25.7
France	26.3	20.4	21.2	19.6	18.4	18.8	19.6	20.4	21.9	22.7
Canada	29.9	27.6	31.7	28.3	25.6	30.8	34.7	34.8	35.1	34.3

(1) Published in *British Business*, 9 October 1987 and 22 April 1988.

(2) In the tables that follow, estimates are presented where consistently available.

(3) OECD National Accounts, Volume II.

(4) *British Business*, 13 November 1987.

As can be seen from Table D, most recent estimates suggest that profit shares (both gross and net, except in Japan and Italy, for which no net figures are available) have shown an upward trend in the 1980s. The exception is Japan, where gross profit shares have declined, though remaining at a high level. There are few generalisations to be drawn for the group as a whole. The United Kingdom has experienced almost continuous growth in its gross and net profit shares throughout the 1980s, taking it from near the bottom of the range to near the top.

Figures for gross capital productivity are highest for Germany and lowest in Canada. The trend in capital productivity in the United Kingdom in the 1980s has been upward, whereas in Germany and the United States it has remained broadly constant and in France and

Table E
Capital productivity

Gross value added as
a percentage of gross capital stock

	1973	1975	1980	1981	1982	1983	1984	1985	1986	1987
United States	44.1	36.5	35.7	34.5	31.5	32.1	35.0	35.4	35.2	35.1
United Kingdom	26.5	23.8	23.5	22.6	23.3	24.3	24.6	25.5	24.5	26.4
Germany	43.6	38.2	38.3	36.5	35.8	36.1	36.3	36.8	37.0	36.8
France	44.6	40.8	38.4	36.7	35.8	35.5	35.0	34.3	33.8	33.2
Canada	28.9	26.1	24.5	23.4	20.6	20.9	21.9	22.0	22.2	23.0

Net value added as
a percentage of net capital stock

	1973	1975	1980	1981	1982	1983	1984	1985	1986	1987
United States	68.9	55.4	54.1	51.9	46.8	48.7	54.4	55.6	55.8	55.8
United Kingdom	40.2	35.6	35.5	34.4	36.1	38.2	39.3	41.2	39.6	43.7
Germany	62.1	54.8	57.7	54.8	54.0	55.0	55.6	56.7	57.2	56.8
France	65.3	59.0	56.5	53.9	52.6	52.6	52.1	50.9	50.0	48.9
Canada	39.4	35.1	32.9	31.0	26.7	27.4	29.2	29.6	30.2	32.0

Canada it has fallen. The United Kingdom has now reached the level it was experiencing in the early 1970s. Over the past few years, net capital productivity has risen

Real wage gaps and profit margins

Evidence on trends in profitability can be provided by real wage gaps and profit margins, as well as by the rate of return. Real wage gaps are calculated as the difference between warranted and actual real wage growth. Warranted real wage growth is commonly defined as the growth rate of real wages that would leave the labour share of income unchanged. This is calculated by summing productivity growth (output per employee) and a measure of the change in the weighted terms of trade. Profits per unit of output will remain unchanged if the increase in wages equals the productivity growth plus the terms of trade allowance. Actual real wages are defined as compensation per employee deflated by the consumers' expenditure deflator. Real wage gaps attempt to analyse the size and direction of changes in profitability: movements in profits per unit of output can be studied by examining the signs in the wage gap data. A positive sign indicates a shift towards profits—as productivity growth is more than offsetting the increase in wages. It should be emphasised that these real wage gaps only provide information about *changes* in profitability and reveal nothing about its absolute level.

For the major seven countries, the 1980s have, in general, shown positive real wage gaps, implying a move towards profits. Strong productivity growth was the initial cause in the early stages of the recovery, but the continuation has been the result of relatively restrained real wage growth and, at the same time, enhanced warranted wage growth in most countries

Real wage gaps

Percentage points

	1980	1981	1982	1983	1984	1985	1986	1987
United States	-0.4	1.4	-1.0	1.2	1.2	0.2	0.3	0.3
Japan	0.5	0.2	0.5	0.3	2.0	2.9	4.7	1.0
Germany	-2.7	-0.6	2.8	3.6	1.4	0.7	1.7	-0.4
France	-1.1	-0.4	1.0	0.2	2.2	2.1	1.4	2.0
Italy	-0.9	-5.5	-0.1	1.3	5.1	0.4	5.2	-2.7
Canada	-0.1	-2.7	-0.9	4.8	3.5	-0.2	1.4	0.4
United Kingdom	-3.5	2.1	4.1	1.6	-1.4	3.1	-3.2	-0.3

(caused by the fall in oil and commodity prices in 1986 which raised the terms of trade).

Figures for the United Kingdom show a shift towards profits in the early 1980s, but 1986 and 1987 have seen a shift back towards wages. The terms of trade adjustment, essentially a weighted ratio of the price of exports to that of imports, is heavily influenced by the size of the oil producing sector. This can sometimes cause problems in the interpretation of the UK figures (as in 1986 when the fall in oil prices significantly reduced oil company profits). This caused a shift away from profits in the United Kingdom despite the high profitability of the non-oil sector, while in the other countries there was a move towards profits.

An indicator of profit margins is given by the ratio of prices to costs. The accompanying table shows calculations for profit margins in manufacturing industries in the major countries.

Profit margins

1980 = 1.00

	1980	1981	1982	1983	1984	1985	1986	1987
United States	1.00	1.02	1.02	1.05	1.08	1.12	1.14	1.15
Japan	1.00	0.98	0.99	1.00	1.04	1.06	1.01	1.00
Germany	1.00	1.02	1.04	1.04	1.05	1.03	0.98	0.93
France	1.00	1.01	1.02	1.03	1.04	1.05	1.05	1.10
Italy	1.00	0.94	0.94	0.95	0.97	0.97	1.10	1.13
Canada	1.00	1.03	1.00	1.04	1.12	1.14	1.10	1.12
United Kingdom	1.00	1.00	1.03	1.08	1.10	1.13	1.19	1.21

The United Kingdom and the United States have significantly improved their profit margins throughout the period, while Germany has seen a modest decline. Despite having the lowest unit labour costs for the major seven countries, Japan appears to have one of the lowest profit margins. Appreciation of the yen in 1985 changed the pattern of sector profits significantly—export-orientated industries saw profits squeezed.

significantly in the United Kingdom, but appears to have fallen in Germany, France and Canada. Despite falling throughout the 1980s, net capital productivity in Germany has remained the highest in the group.

Prior to 1982 the highest net rates of return occurred in Germany and the United States.⁽¹⁾ However, the United Kingdom has steadily improved its rate of return and now appears both to have surpassed the peaks of the early

seventies and to have moved above the average of its industrial competitors.

As can be seen by comparing Tables C and F, the measure calculated from OECD data for the United Kingdom is somewhat higher than that calculated by the Bank. This is mainly because in the Bank measure the capital base includes stocks of raw materials, finished goods and work in progress, whereas the OECD measure does not.

Table F
Rates of return

Gross operating surplus as
a percentage of gross capital stock

	1973	1975	1980	1981	1982	1983	1984	1985	1986	1987
United States	13.3	11.9	11.5	11.4	10.3	11.1	12.6	12.6	12.5	12.5
United Kingdom	8.3	5.7	7.5	7.6	8.5	9.6	10.1	10.7	9.7	11.2
Germany	14.2	11.8	11.6	10.7	10.9	11.9	12.1	12.6	13.0	13.0
France(a)	15.7	12.7	12.4	11.6	11.1	11.1	11.3	11.3	11.6	11.7
Canada	11.0	9.6	10.1	9.0	7.8	8.8	9.8	9.8	10.0	10.7

Net operating surplus as
a percentage of net capital stock

	1973	1975	1980	1981	1982	1983	1984	1985	1986	1987
United States	15.2	12.6	11.5	11.1	9.1	11.0	13.7	13.9	13.9	13.9
United Kingdom	8.8	4.1	6.9	7.2	9.0	11.0	12.0	13.2	11.3	14.3
Germany	15.0	11.3	11.6	10.2	10.6	12.4	12.8	13.7	14.5	14.6
France(a)	17.1	12.0	12.0	10.6	9.7	9.9	10.2	10.4	10.9	11.1
Canada	11.8	9.7	10.4	8.8	6.8	8.4	10.2	10.3	10.6	11.0

(a) Includes stock appreciation.

Conclusion

This article has highlighted several problems encountered in calculating rates of return for a single country and in making comparisons of rates of return across countries. These are mainly concentrated in the calculation of the capital stock and capital depreciation, although differences in the composition of operating surpluses also occur. Subject to these caveats about the interpretation of the estimates, the calculations presented here (updating those published by the OECD) show that the United Kingdom has fared exceptionally well in terms of profitability in recent years as compared with the other major OECD economies.

(1) France also has a relatively high rate of return, but the inclusion of stock appreciation tends to bias the estimates upwards.