

ECONOMIC PERSPECTIVE 3

THE ERM, STERLING DEPRECIATION AND SCOTTISH INDUSTRY

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1. INTRODUCTION

This is the second in a series of papers on the impact of the ERM and of Sterling's recent depreciation on Scottish companies. The first paper (Struthers, 1992) appeared just after Sterling's exit from the ERM in September 1992. That paper analysed perceived costs and benefits of ERM membership on the part of Scottish registered companies¹. The study took the form of a questionnaire survey of the Top 300 Scottish Companies (as defined by the Scottish Business Insider database) and reached the following conclusions:

1. Scottish companies were largely ambivalent towards the ERM, although many of them thought that ERM membership allowed them to keep their unit costs (especially wages) down;
2. Few of them regarded a single European currency as an unequivocally good thing;
3. They preferred, on balance, a system of semi-fixed exchange rates to one of floating exchange rates;
4. Many firms considered further expansion within EU markets to be both desirable and likely;
5. Finally, if faced with the choice, they preferred interest rate cuts (even if this meant staying outside the ERM) than the greater exchange rate stability that ERM membership was supposed to produce.

The previous study also tried to elicit company responses to some of the more microeconomic adjustments which lie at the heart of the ERM debate; such as whether companies were able to quantify the exchange rate/interest rate/inflation rate trade-offs of ERM membership. In fact, few of the respondents were able to quantify these effects,

implying a dearth of knowledge on their part with respect to export and import elasticities. Such findings challenged the implicit assumptions contained within recent macroeconomic debate that there is such a thing as the "correct level" for Sterling, whether within or outside the ERM.

All, or most, of the above suggests that exchange rate levels (and fluctuations) are not as important to companies as the need to join an ERM-type system might suggest. Such a conclusion is of obvious relevance to the wider macroeconomic debate surrounding the future of the ERM and a single European currency. However, there remains a lack of analysis founded on microeconomic information of this type. This study attempts to fill this gap, at least within the Scottish context.

2. THE PRESENT STUDY

This study is a follow-up to the previous one and is based on another questionnaire survey, this time of the Top 500 Scottish Companies, again as defined by the recently updated Scottish Business Insider database. It was circulated to the Finance Directors of these companies in March 1994, some 18 months after Sterling's exit from the ERM. At the time of writing, approximately 140 responses had been received, 123 (88%) of which contained answers to all or some of the questions posed. This paper attempts to analyse the responses of these companies to Sterling's recent depreciation in the areas identified in Section 4 below. It should be noted, given the length of the questionnaire (containing 55 questions), that only a sample will be analysed herein. Further studies are planned in order to analyse the remaining issues.

3. SECTORAL ANALYSIS

This Section presents, in graphical form, a breakdown of key company characteristics such as: sector/number of employees/annual sales turnover/ratio of exports/total sales revenue, country of exports etc. These appear in Graphs 1 - 8. Such

background statistics also provide the opportunity for cross-tabulations with some of the specific questions addressed within Section 4.

From the statistics it is clear that the study represents a comprehensive assessment of these Scottish companies. The sector coverage is broad, extending across 7 different categories with engineering, financial services, tobacco and drinks, as expected, enjoying the widest coverage². In terms of employee levels, the study represents an analysis of middle-level to high-level employee concentrations with the 101-500 and 501-5000 employee categories accounting for approximately 80% of the total responses. This is matched by annual sales turnover levels which tend to be bunched at the £10 million upwards level - (£10-£50 million, 65% of the total; and over £50 million at approximately 25%).

When it comes to the ratio of export/total sales revenue, the pattern is reversed; with approximately 80% in the 0-10% range, and the remainder spread evenly across the other categories. As far as the proportions of company exports going to EU countries are concerned Graphs 6, 7 and 8 explain the proportions of exports going to EU countries, the US and Japan respectively. These indicate that approximately 50% of respondents exported 30% or more of their total exports to EU countries.

Finally, of those companies who could assess the relative profitability of their export sales to profitability of domestic sales, approximately half of respondents indicated that their export markets were between equally profitable and in excess of twice as profitable as their domestic markets. This finding is important for the discussion in Section 6 in which company pricing strategy after Sterling's exit from the ERM and subsequent depreciation is discussed.

The remainder of the paper is divided as follows. The next section outlines a selection of the questions contained in the questionnaire, notably those dealing with overall balance of payments aspects. The following section presents a summary of the key responses to these questions. The concluding section considers some of the implications of the study and suggestions for future research.

4. SAMPLE QUESTIONS

QUESTION 1

In the EU markets in which your company operates which of the following factors influence your ability to compete effectively? Please rank them in order of priority:

1. Unit Costs
2. Product Quality
3. Delivery Periods
4. Maintenance
5. Price
6. Exchange Rate
7. Other (Please specify)

The rationale for this question is two-fold. Firstly, ever since the work of Thirlwall (1978, 1980 and 1992) examination of the respective roles played by exchange rate and non-exchange rate factors in explaining the UK's balance of payments performance has received much attention in the literature. Thirlwall's early work, reinforced by his more recent studies, suggested that non-exchange rate factors such as product quality, delivery periods etc, had a crucial influence in explaining the UK's perennial current account problem. These characteristics were aggregated by Thirlwall into estimates of income elasticities of demand for imports into the UK and world income elasticity of demand for UK exports. Thirlwall reported for a diverse range of 30 final products estimates of the respective income elasticities, and without exception, the world income elasticity of demand for UK exports was lower than the UK income elasticity of demand for imports. Income elasticity estimates reflect a whole range of non-price and product specific characteristics, similar to those referred to in Question 1.

The present study tries to shed light on these questions during the recent period in which Sterling's value depreciated after the currency's departure from the ERM. Indeed, with reference to the aforementioned studies which dealt with the years following the 1967 devaluation useful comparison can be made with the post-1992 period (see below, and subsequent paper.)

The second reason for eliciting comments on these issues is to direct the attention of commentators away from some of the purely macroeconomic considerations central to the ERM debate, and to shift attention towards microeconomic considerations. Current debate probably suffers from excessive "misplaced aggregation" with far too little attention paid to how firms actually respond to a currency depreciation. Actual replies to Question 1 will obviously depend upon the

particular markets in which these firms have to compete. To the extent they are characterised by oligopolistic market structures, it should be expected that non-price forms of competition will dominate price competition. The inclusion of the exchange rate adds a further complexity to such discussion. Hence, it is vital to separate out the purely exchange rate factors from other price, but non-exchange rate, factors. This takes us to Question 2.

QUESTION 2

In the period since Sterling's exit from the ERM and subsequent depreciation which of the following actions has your company undertaken?

1. **Retained the domestic currency price of goods exported;**
2. **Adjusted the domestic currency price by the full extent of the depreciation;**
3. **Adjusted the domestic price:**
 - **by less than the depreciation;**
 - **by more than the depreciation;**

This is also a vital question to ask. If exporting companies respond to a depreciation of the currency by raising the domestic currency price by a proportion, the full extent, or even more than the depreciation, this may erode, partially or wholly, any competitive gain to be derived from the currency depreciation.

Studies by Gribben (1971), Rosendale (1973), Hague, Oakeshott and Strain (1974), and Holmes (1978), have all highlighted the inconsistencies of UK company responses consequent on the 1967 devaluation of sterling. These studies addressed issues concerned with the effects of the 1967 devaluation on: export volume and value (this being related to the divergent levels of profitability between output for the domestic market and output for the export market); the divergent reactions of companies with respect to the currencies in which invoices are issued; the mismatch between import responses and export responses (based on elasticity parameters as well as capacity utilisation considerations); and the type of overseas market in which the UK firms operated (oligopolistic or competitive). These and other aspects are picked up later in this paper, or in the subsequent paper.

As far as Question 2 is concerned, Rosendale's findings are relevant to the present study. In a study of the responses of 29 UK firms in electrical and mechanical engineering at the time of the 1967

devaluation, the nature and extent of the market structure in which companies operated, influenced price reactions. For those products in a fairly competitive position within export markets, prices were increased by the full extent of the devaluation in 50% of the cases (38% were left unchanged). For the more competitive product types, greater proportions were left unchanged (between 42% and 52%). For the products where competitive pressures were less intense, price increases, on average, were less than 14%. In general terms, then, price reactions followed and were dictated by the market environment in which firms operated in their export products. However, there was also some evidence of poor consistency between market structure and price response, with many firms adjusting the domestic currency price in order to reflect cost pressures, presumably from the devaluation - induced higher import costs. Question 2 and others which follow it, attempt to assess issues of this nature.

QUESTION 3

Based on your answer to Question 2 can you indicate whether your domestic currency price reaction was determined on the basis of a clear pricing strategy vis-a-vis exports and domestic output?

This question tries to discover whether company decision-makers really understand the potential affect on their company's performance of a currency depreciation. Do decision-makers, for example, adequately understand concepts such as price and income elasticity of exports and imports in order that they can make an informed decision as far as their price responses are concerned. And, if they do understand these concepts, do they have the information on which to base such accurate responses?³ Or, are their pricing decisions ad-hoc and based on "guessestimates" of the appropriate values? (See also Rosendale here)

QUESTION 4

In the period since September 1992 has your company adjusted the proportion of its output in favour of higher exports?

This is an obvious question to ask, since it is expected that a currency devaluation will positively affect, after a time lag, a country's exports. The J-Curve analysis (see Maser, 1974 and Rivera-Batiz and Rivera-Batiz, 1994) is of obvious relevance here. Recent figures issued by the Central

Statistical Office (CSO, March 1994) indicate that, after a downturn in the UK's balance of payments on current account in late 1992, by the end of 1993 this was in reverse (see Graph 9). Attention, of course has also to be directed towards the effect of the depreciation on imports (see Questions 9-12). Moreover, a clear understanding of the relative importance of EU (as opposed to non-EU trade patterns) is also required (see Questions 13 & 14).

QUESTION 5

Based on your response to Question 4 can you estimate in percentage terms, as appropriate on the scale.⁴

- 0% - 10%
- 11% - 20%
- 21% - 30%
- 31% - 40%
- 41% - 50%
- 51% - 60%
- 61% - 70%
- 71% - 80%
- Over 80%

QUESTION 6

At the time of writing, it is estimated that in the period since Black (White!) Wednesday - 15 September 1992 - Sterling's value has depreciated by approximately 13% with respect to its previous central DM rate. If prior to that date your company already exported to EU countries has this depreciation stimulated both the level and value of these exports?⁵

QUESTION 7

If your company now exports more in the period since September 1992 does the increase represent additional output specifically for the export market or a shift of production away from domestic output?

QUESTION 8

If prior to September 1992 your company did not export to EU countries does it now export to those countries?⁶

Moving now to the import side of the balance of payments, the following questions were asked:

QUESTION 9

Has the depreciation of Sterling during the period since the currency left the ERM increased the cost of your import bill?

QUESTION 10

If your answer to Question 9 is YES can you quantify the effect in percentage terms?

QUESTION 11

If your answer to Question 9 is YES, can you also quantify in percentage terms the increased costs derived from those imported intermediate goods which are required to produce final goods either for the domestic or the foreign market?

QUESTION 12

If the costs of your imported intermediate goods have increased has this adversely affected your company's export response?

Questions 9-12 are vitally important on which to elicit views, especially considering the heavy reliance of many UK exporters on imported intermediate goods (including raw materials). Mapping the knock-on effects of these changes on company export performance is complex and involves separating the diverse effects of the recent depreciation on the following factors:

the relative profitability of exports/domestic sales;

the impact of the currency depreciation on unit labour costs [ULC] (especially wages/salaries); and

the beneficial effect on companies of lower interest rates in the period since Sterling's exit from the ERM.

Discussion of these interactions will appear in the subsequent paper. In that paper, questionnaire findings on ULC'S, interest rate effects and imported intermediate goods effects will be analysed and reported. At the present stage the author has received initial responses on these questions. However, further quantitative analysis of these aspects, including relevant cross-tabulations and correlation analysis is deferred for the moment.

QUESTION 13

In the period since Sterling's exit from the ERM has your company increased its exports to non-

EU countries?

QUESTION 14

If your answer to Question 13 is YES, can you quantify the proportion in percentage terms?

5. QUESTIONNAIRE RESULTS

See Table 1

CROSS-TABULATIONS AND CHI-SQUARE TESTS

Table 2 presents the results of Chi-Square Tests between Questions 10, 11, 12, 18 and Question 1; and between Question 16 and Question 4. These establish the existence of a degree of correlation between the variables specified.

Chi-Square statistics measure the discrepancy between observed and expected frequencies and the values in the table show tests of significance at the 5% and 10% significance levels.

Those questions correlated with Question 1 present some potentially interesting implications. The significant relationship between Question 10 and Question 1, suggests that the particular price response which each company adopted was significantly influenced by whichever sector the company was in. Since some of these sectors involve a high degree of international competition (eg engineering, tobacco and drinks and textiles) this would help to explain why the price responses of the different companies varied so much (see Table 1). The same general point would apply to the correlation between the responses to Questions 11 and Question 1. Once again, the extent to which companies responded by indicating whether they had a clear pricing strategy or not after Sterling's depreciation, was determined by the type of sector in which these companies operated.

As far as the correlation established between Question 12 and Question 1 is concerned, once again the extent to which companies altered the proportion of their output in favour of higher exports after Sterling's depreciation was sector-specific. A potential explanation for this link may lie with the simple fact that different companies operating within different sectors of the Scottish economy would have varying propensities to alter their output in favour of higher exports, at least over the short-run. This in turn would be affected by the extent to which they had previously

exported, and their overall capacity utilisation levels before and after Sterling's exit from the ERM. (These aspects will be discussed more fully in the subsequent paper.)

Moving to the correlations between Question 18 and Question 1 and between Question 16 and Question 4, there appears to be some limited evidence that the extent to which companies who did not export to EU countries prior to Sterling's exit from the ERM and who now do export to these countries is dependent on the sectors in which they operated. A potentially interesting finding from the specific correlation established between Question 16 and Question 4 is the direct relationship between a company's propensity to export out of additional output (as opposed to redirecting output from the domestic market) and the company's ratio of exports to overall sales revenue.

Finally, it is worthy of note that when the same questions (10, 11, 12, 16 and 18) were correlated with Question 5 (an estimate of the relative profitability of the company's export markets to domestic markets), no significant relationships using the Chi-Square were obtained.

6. INTERPRETATION

As already indicated in the first section of this paper, this study was designed to assess the impact of Sterling's exit from the ERM on a series of balance of payments indicators for Scottish registered companies. Before considering in detail the key findings from this study, a number of methodological features of the study should be highlighted.

Firstly, as with all studies based purely on a questionnaire survey, however comprehensive is the questionnaire, there is always the danger that respondents will either respond to the questions in a biased fashion by proffering answers which present their own company in a good light; or engage in post-hoc rationalisation. The latter is based on the notion that because the study is retrospective, there will inevitably be a tendency to ascribe causality between variables, which proper statistical analysis would challenge.

Secondly, given the rather technical nature of some of the questions in this study, it is unlikely that even company Finance Directors will have adequate and complete information on which to base their responses. As a consequence, it should be assumed, unless supplementary information is

provided⁷, that responses to the more technical questions are no more than "best guessestimates". An indication of this was the paucity of information to be gleaned from the more specific quantitative questions, (typically the questions which elicited the poorest response rates, ie those questions seeking percentage estimates of the relevant effects - numbers 5, 10, 11 & 14). Indeed, this was to be expected and was the reason for asking questions of this sort.

An additional point is that in order to be able to answer some of the questions posed, further more detailed questions require to be answered. A case in point is Question 2 which requested information on the extent to which companies adjusted their domestic currency prices after Sterling's depreciation. In order to understand this question more fully, it would have been useful to ask a supplementary question on the type of market environment in which the company operates. Obviously, the company's response to this question will vary according to whether it enjoys a monopoly (or near-monopoly) position in the international market for its product(s), or whether the market is a competitive one. The same considerations are relevant to the issue raised in the first section of this paper in connection with the relative profitability of the export market to domestic markets.

The above notwithstanding, what are the main implications of the findings which appear in Table 1? In order to facilitate discussion it might be sensible to structure the 14 questions reported in this study under FIVE main headings.

a) DOES THE EXCHANGE RATE REALLY MATTER?

The first question is the basic one of whether, in the light of these responses, the exchange rate is the all-important variable influencing the propensity of diverse companies to enter or increase their involvement in an export market. Based on responses to Questions 1, 4, 5, 6, and 8 significant doubt may be expressed on this matter. From responses to Question 1, it appears that the exchange rate should be ranked lower than price, product quality and delivery times, and no higher than unit costs (See Graph 10). This is consistent with the findings of Thirlwall (1978, 1992) with reference to the 1967 devaluation as reported in the first section of this paper. Similarly, with reference to Questions 4, 5 and 6 and even allowing for a substantial Sterling depreciation in the post-

September 1992 period, as well as the average time-lags consistent with J-Curve analysis, there appears to be little evidence of Scottish companies responding significantly in favour of export products. This is true both in terms of the Level and the Value of export markets.⁸ Nor is there much evidence (see Question 8) of Scottish companies moving into EU markets in the post-1992 period. A mere 2% of respondents did so.

b) PRICE RESPONSES

The second general theme particularly relates to Questions 2 & 3. From responses to these questions although 72% of total respondents retained the domestic currency prices of their export products, the remainder adjusted their prices either fully to offset the depreciation, partially, or by more than the depreciation itself (Question 2). Examination of the responses to Question 3, however, suggests that few companies (38% of respondents) adopted a clear pricing policy with regard to their export products. This finding is consistent with those of Rosendale reported on earlier after the 1967 devaluation.

c) SOURCE OF ADDITIONAL EXPORTS

The third area to highlight relates to the (albeit limited) responses to Question 7. An encouraging trend appears to be with regard to those companies who responded favourably in Questions 5 and 6 by indicating higher export activity, for whom a significant proportion of respondents (70%) indicated that their higher export activity derived from additional overall output as opposed to a shift away from domestic output. This finding is consistent with the general supposition among commentators such as the CBI and Chambers of Commerce at the time of Sterling's exit from the ERM that a falling pound would (in contrast to the post-1967 period) ultimately benefit UK industry because of the unused capacity prevalent in UK (and Scottish) industry. Recent CBI estimates published in April 1994 indicate that approximately 59% of UK companies were operating below full capacity; while 92% had sufficient capacity to satisfy expected demand increases assuming the recovery is sustained. As already indicated, the next paper will give further consideration to capacity utilisation responses of the Scottish companies surveyed in this paper. It will then be discussed within the context of the other factors influencing those effects on the real economy (unit labour costs, interest rates, and investment levels). Suffice to say here that tentative support is provided

for the predictions of CBI and other commentators on the capacity utilisation variable as far as Scottish companies are concerned.

d) IMPORT EFFECTS

Because a currency depreciation acts as a two-edged sword in that it renders imports more expensive as much as it makes exports more competitive, responses to Questions 9, 10, 11 and 12 provide some interesting insights on the impact of Sterling's recent depreciation on company import costs. From Question 9, 60% of the 82 respondents indicated that their import bill had increased as a consequence of the depreciation. However, when in Question 10 they were asked to quantify these effects, almost 50% of the 82 respondents failed to respond, with 91% of those who did respond indicating an increase in their import bill of up to 20% over the period. In turn almost 40% of these indicated an increase of between 11%-20% which, by most measures, is higher than the currency depreciation. Moreover, in responses to Questions 11 and 12, an attempt is made to quantify the likely impact of higher imported intermediate goods prices on companies export response. Of the 39 companies who responded to Question 12 on the export effect, 13% responded by saying that the higher import costs had adversely affected their export response.

Such findings are central to the dynamic processes that lie at the heart of the standard J-Curve analysis but requires more careful and exact modelling. It is, however, safe to conjecture, even without the aid of such modelling, that an 18 month period after Sterling's exit from the ERM should be regarded as sufficiently long (*ceteris paribus*) for these effects to be ironed out. Import mark-ups, over and above the required adjustment to reflect the currency depreciation, may be a valid, though as yet unsubstantiated, explanation.

e) NON-EU MARKETS

The responses to Questions 13 and 14 provide some interesting supporting evidence for the trends shown earlier in Graphs 6, 7 and 8; namely that a large number of Scottish based companies (40%) have expanded their export to non-EU countries. Some, indeed, (see Question 14) have expanded within these markets by substantial proportions.⁹

7. CONCLUSIONS

As is the case with many types of empirical

economic research, this paper undoubtedly raises at least as many questions as it answers. The evidence obtained from this study is quite conflicting evidence; yet as a case study of the impact of Sterling's exit from the ERM on Scottish registered companies it yields some useful insights on the contradictory ways in which Scottish companies have responded. Doubt has been cast on the importance of the exchange rate *per se* in determining the export potential of Scottish companies. Evidence cited above suggests that other non-exchange rate factors are of equal or of more importance to individual companies than much of the macroeconomic debate surrounding the ERM would imply.

In common with earlier studies which analysed the price responses of firms to the 1967 devaluation of Sterling, this study suggested that exporters responded to the recent depreciation of the currency in a quite heterogeneous fashion; sometimes determined by the market environment in which they operated, sometimes responding with no apparent strategy at all. Such a finding highlighted the need to counter the 'misplaced aggregation' mentioned in the introductory sections of the paper.

Yet when the discussion moved to a consideration of the source of additional exports, import effects and the potentially significant positive impact of Sterling's depreciation on non-EU export activity, the evidence is more clear cut, or at least potentially so. Here, the impacts (both positive and negative) of Sterling's depreciation are easier to substantiate.

The implications of these findings in terms of companies overall attitude towards the future of Sterling and the ERM are, however, more difficult to establish. There remains, it seems, a degree of ambivalence towards the currency and the ERM, and, by implication, the arguments for and against a single European currency. The next paper, using the responses to the remaining questions from this survey, will attempt to address some of the outstanding issues raised in this paper.

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5. QUESTIONNAIRE RESULTS

TABLE 1

QUESTION	NO. OF RESPONDENTS	RESPONSES (%'s)
1. In the EU markets in which your company operates which of the following factors influence your ability to compete effectively? Please rank them in order of priority.	53	1. Unit Costs (See Graph 10) 2. Product Quality 3. Delivery Periods 4. Maintenance 5. Price 6. Exchange Rate 7. Other (Please specify)
2. In the period since Sterling's exit from the ERM and subsequent depreciation which of the following actions has your company undertaken?	58	1. Retained the domestic currency price of goods exported; 72% 2. Adjusted the domestic currency price by the full extent of the depreciation; 16% 3. Adjusted the domestic currency price: → by less than the depreciation 9% → by more than the depreciation 3%
3. Based on your answer to Question 2, can you indicate whether your domestic currency price reaction was determined on the basis of a clear pricing strategy vis-a-vis exports and domestic output?	55	YES 38% NO 62%
4. In the period since September 1992 has your company adjusted the proportion of its output in favour of higher exports?	62	YES 34% NO 66%
5. Based on your response to Question 4, can you estimate percentage changes as appropriate on the scale?	21	0% - 10% 33% 11% - 20% 24% 21% - 30% 14% 31% - 40% 19% 41% - 50% 5% 51% - 60% 0% 61% - 70% 5% 71% - 80% 0% Over 80% 0%
6. At the time of writing it is estimated that in the period since Black (White!) Wednesday (15 September 1992) Sterling's value has depreciated by approximately 13% with respect to its previous central DM rate. If prior to that date your company already exported to EU countries has this depreciation stimulated both the level and value of these exports?	47 (Level) 50 (Value)	<u>LEVEL</u> YES 28% NO 72% <u>VALUE</u> YES 32% NO 68%

QUESTION	NO. OF RESPONDENTS	RESPONSES (%'s)	
7. If your company now exports more in the period since September 1992 does the increase represent additional output specifically for the export market or a shift of production away from domestic output?	37	1. Additional Output 70%	2. Shift from Domestic Output 30%
8. If prior to September 1992 your company did not export to EU countries does your company now export to these countries?	43	YES 2%	NO 98%
9. Has the depreciation of Sterling during the period since the currency left the ERM increased the cost of your import bill?	82	YES 60%	NO 40%
10. If your answer to Question 9 is YES, can you quantify the effect in percentage terms?	46	0% - 10% 52%	11% - 20% 39%
11. If your answer to Question 9 is YES, can you also quantify in percentage terms the increased costs derived from those imported intermediate goods which are required to produce final goods (either for the domestic or the foreign market)?	40	0% - 10% 62%	11% - 20% 25%
12. If the costs of your imported intermediate goods have increased has this adversely affected your company's export response?	39	YES 13%	NO 87%
13. In the period since Sterling's exit from the ERM has your company increased its exports to non-EU countries?	66	YES 42%	NO 58%
14. If your answer to Question 13 is YES, can you quantify the proportion in percentage terms?	28	0% - 10% 21%	11% - 20% 29%
		21% - 30% 18%	31% - 40% 14%
		41% - 50% 11%	51% - 60% 0%
		61% - 70% 4%	71% - 80% 0%
		Over 80% 3%	

TABLE 2: CHI-SQUARE RESULTS

CORRELATIONS BETWEEN QUESTIONS	DEGREES OF FREEDOM	SIGNIFICANCE LEVELS	
		10%	5%
A. Q10 and Q1	15	✓	
B. Q11 and Q1	6	✓	
C. Q12 and Q1	6		✓
D. Q18 and Q1	4		✓
E. Q16 and Q4	8	✓	

ENDNOTES

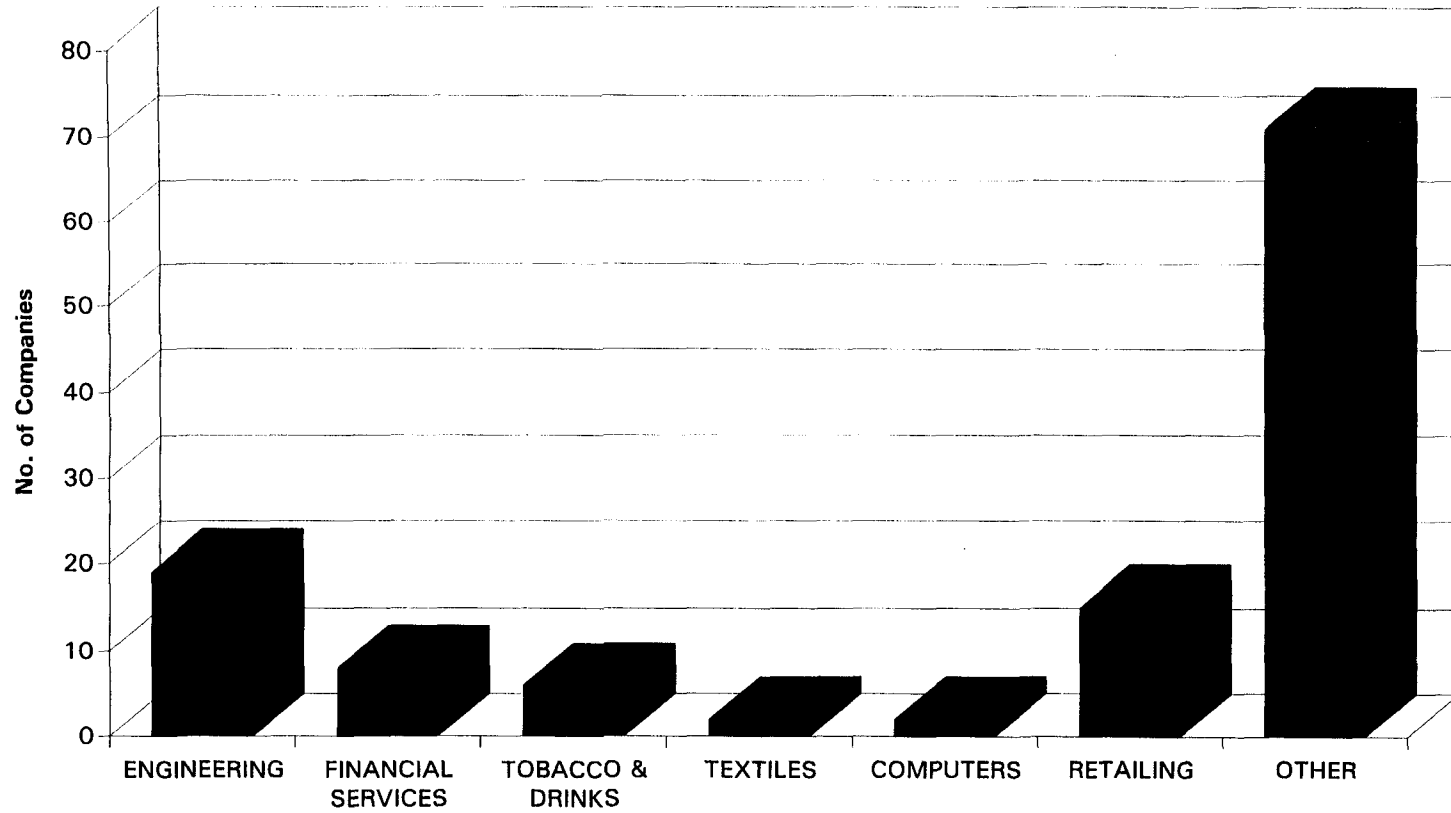
1. The database does not distinguish ownership of the registered companies. To the extent that some of these companies are foreign-owned (the subsidiaries of large multinationals, for example) their responses will be influenced accordingly. See Hood and Young (1988) for a useful discussion of alternative MNE responses to the depreciation of Sterling against the US Dollar and the Japanese Yen in 1984-85.
2. Of the 70 or so OTHER categories who responded, there were heavy concentrations in construction, transport and distribution, paper and timber products, chemical products and oil-related activities. Further analysis of company responses to exchange rate uncertainty by particular industry type is planned.
3. A similar conclusion was reached in the author's earlier paper (Struthers, op cit). There was very little evidence at the time of Sterling's exit from the ERM that companies remotely understood the costs and benefits of Sterling's entry to the ERM (especially at a DM exchange rate of 2.95) in terms of exchange rate/interest rate/and inflation rate trade-offs.
4. It is evident from the paucity of responses to questions such as 5, that few companies have the level of information enabling them to quantify percentage responses. This was true of a number of such questions requiring estimates of this sort.
5. The reason why the question is divided into two elements (Level and Value), is to reflect the extent to which the profitability of exports to domestic sales is reflected in value responses (as opposed to level responses). However, cross-tabulations carried out to elicit such correlations did not prove significant.
6. The reason for asking this question is to assess the potential dynamic effects of Sterling's exit from the ERM not just on those companies who already exported but those, post-depreciation, who perceived the potential of doing so.
7. Some respondents did proffer additional unsolicited comments to some of the questions posed. For example, in response to Question 1 typical replies under the OTHER categories indicating the relative importance of exchange rate to non-exchange rate factors were: the quality of their company's distribution channels, the

availability and efficiency of local sub-contractors in overseas markets and technical support facilities in those markets.

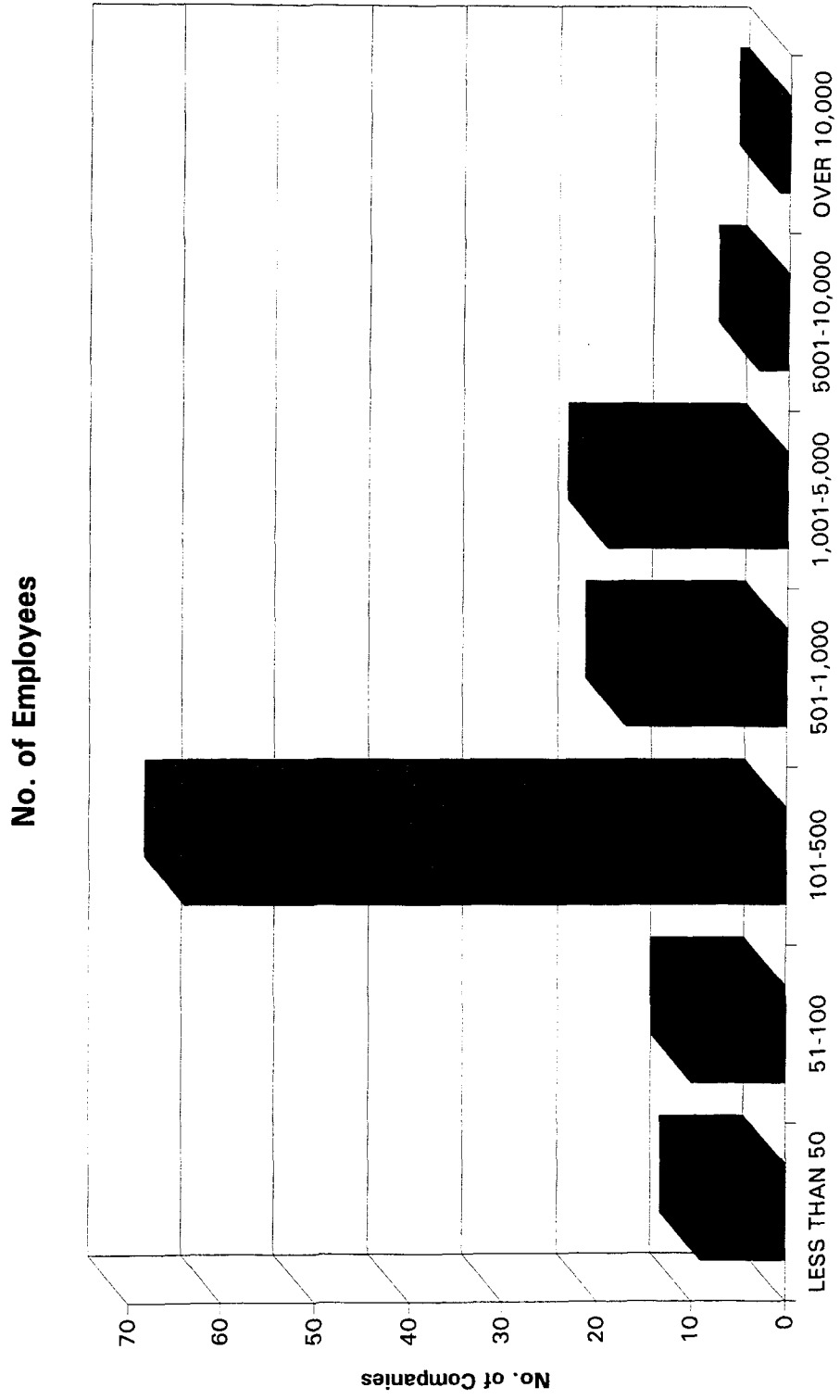
8. In the period since Sterling's exit from the ERM the currency's value has not plummeted to the extent that many commentators had predicted at the time, especially in relation to its level just prior to exit. Indeed, the DM rate during the 18 months period since September 1992 has overall been remarkably stable; thereby lending support to the view that currency stability does not always require, nor is always guaranteed by, a fixed exchange rate system such as the ERM.
9. Additional questions relating to the currencies used in foreign trade; the extent to which forward contracts are used and the extent to which companies locked in their foreign trade contracts at pre-existing exchange rates also produced some useful responses. However, detailed analysis of these aspects will be deferred to a subsequent paper.

Graph 1

Industry Categories

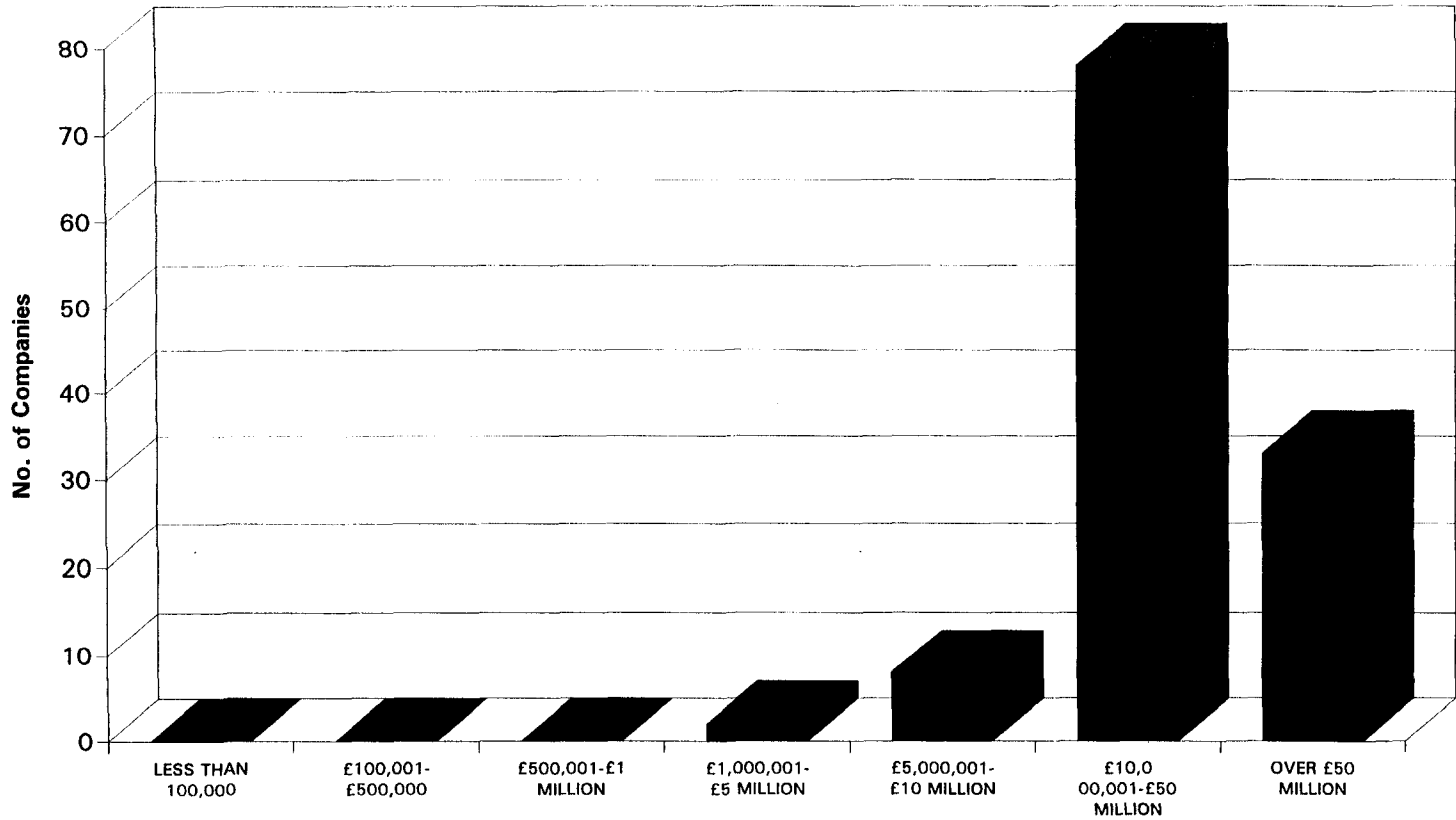


Graph 2



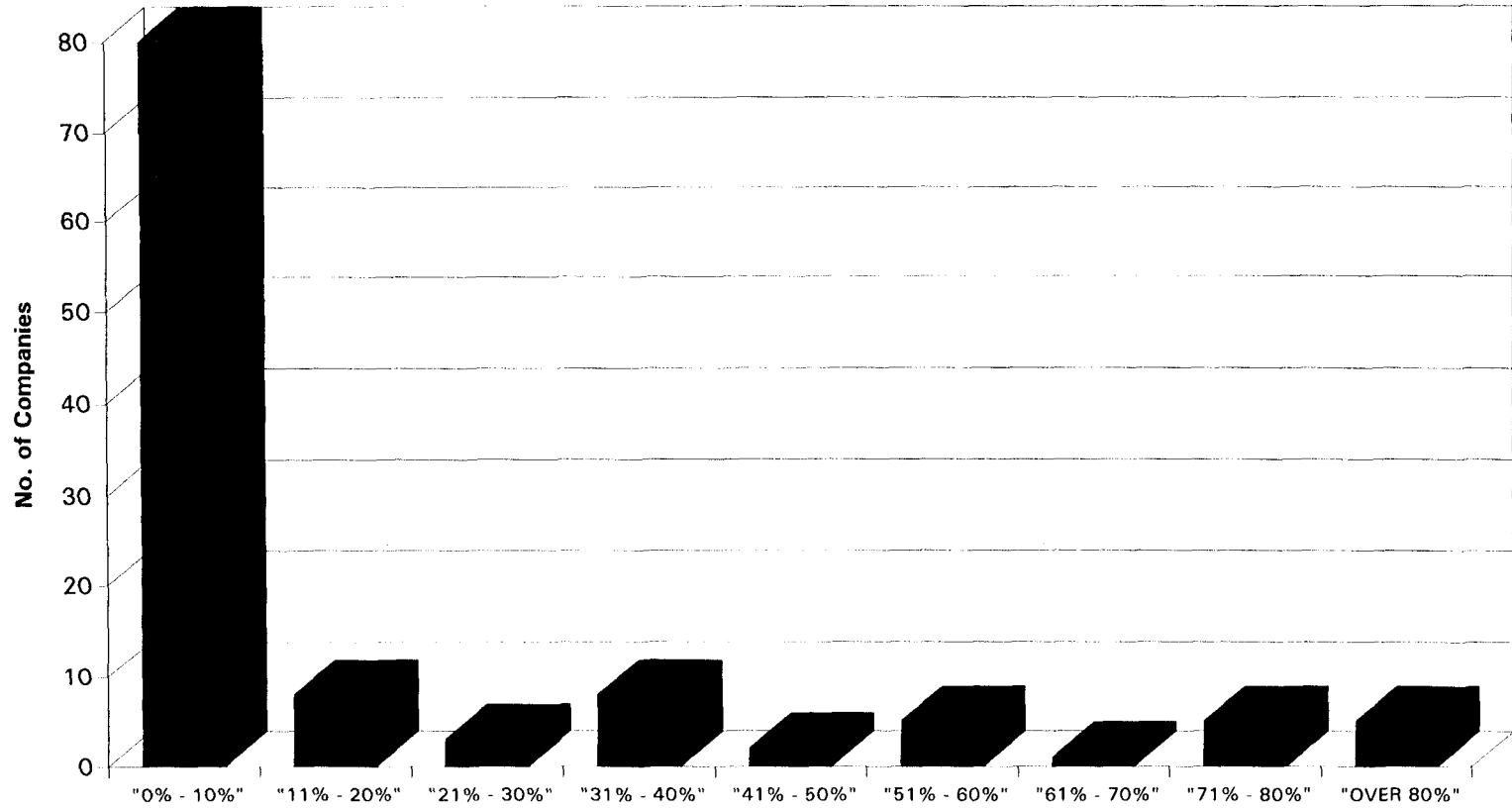
Graph 3

Sales Turnover



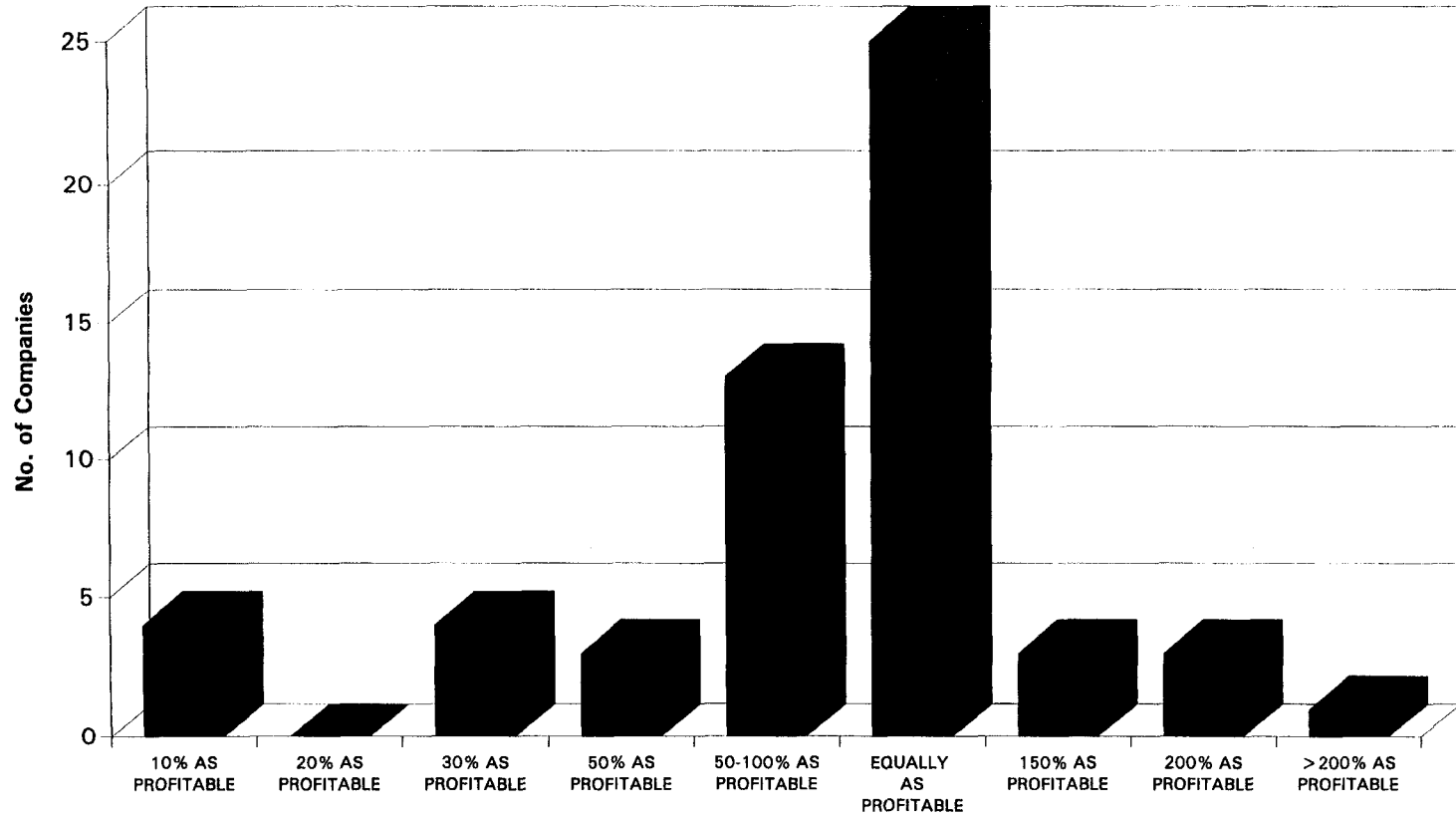
Graph 4

Ratio Exports/Sales Revenue



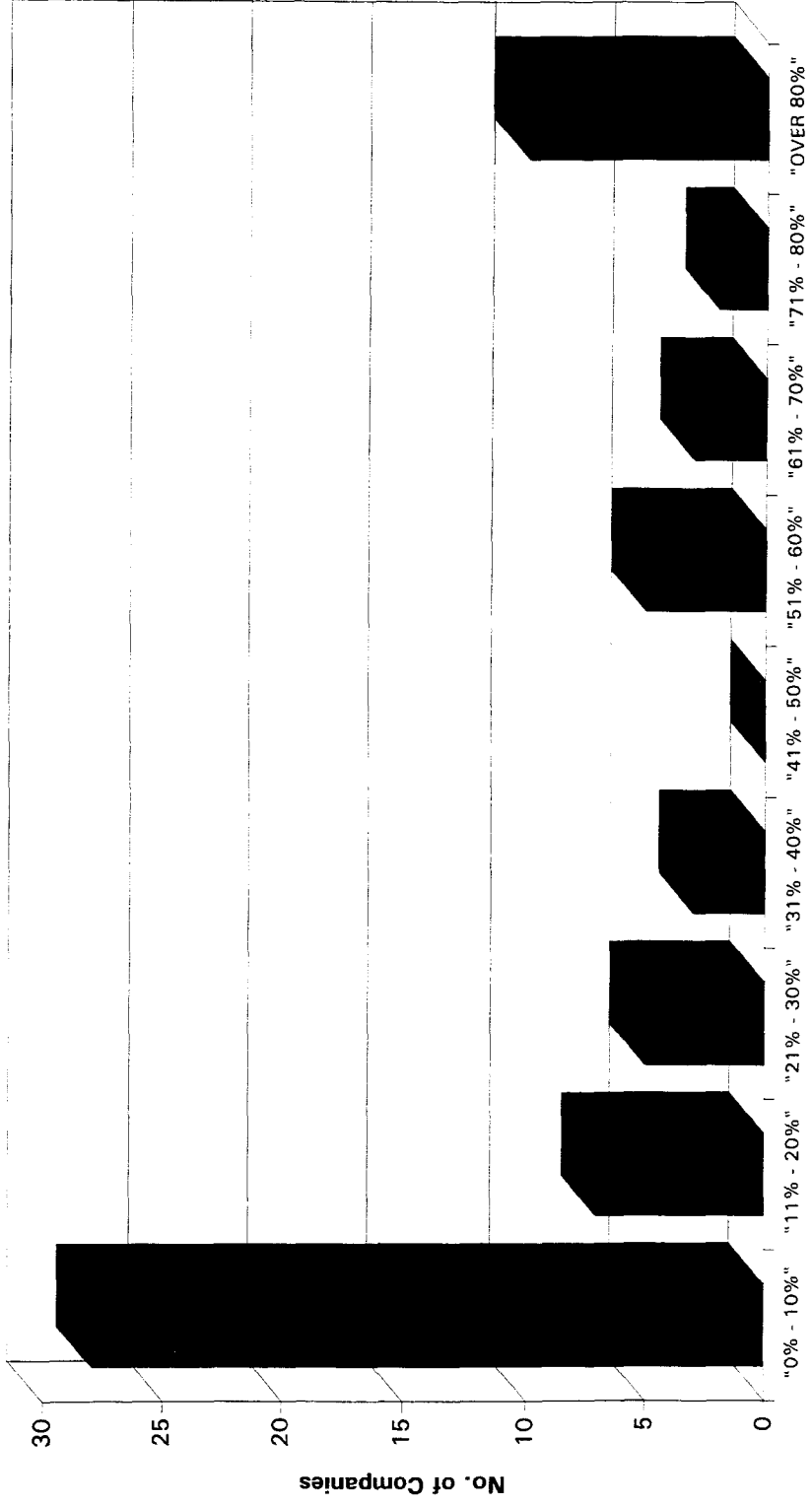
Graph 5

Profitability of Export Markets/Domestic Markets



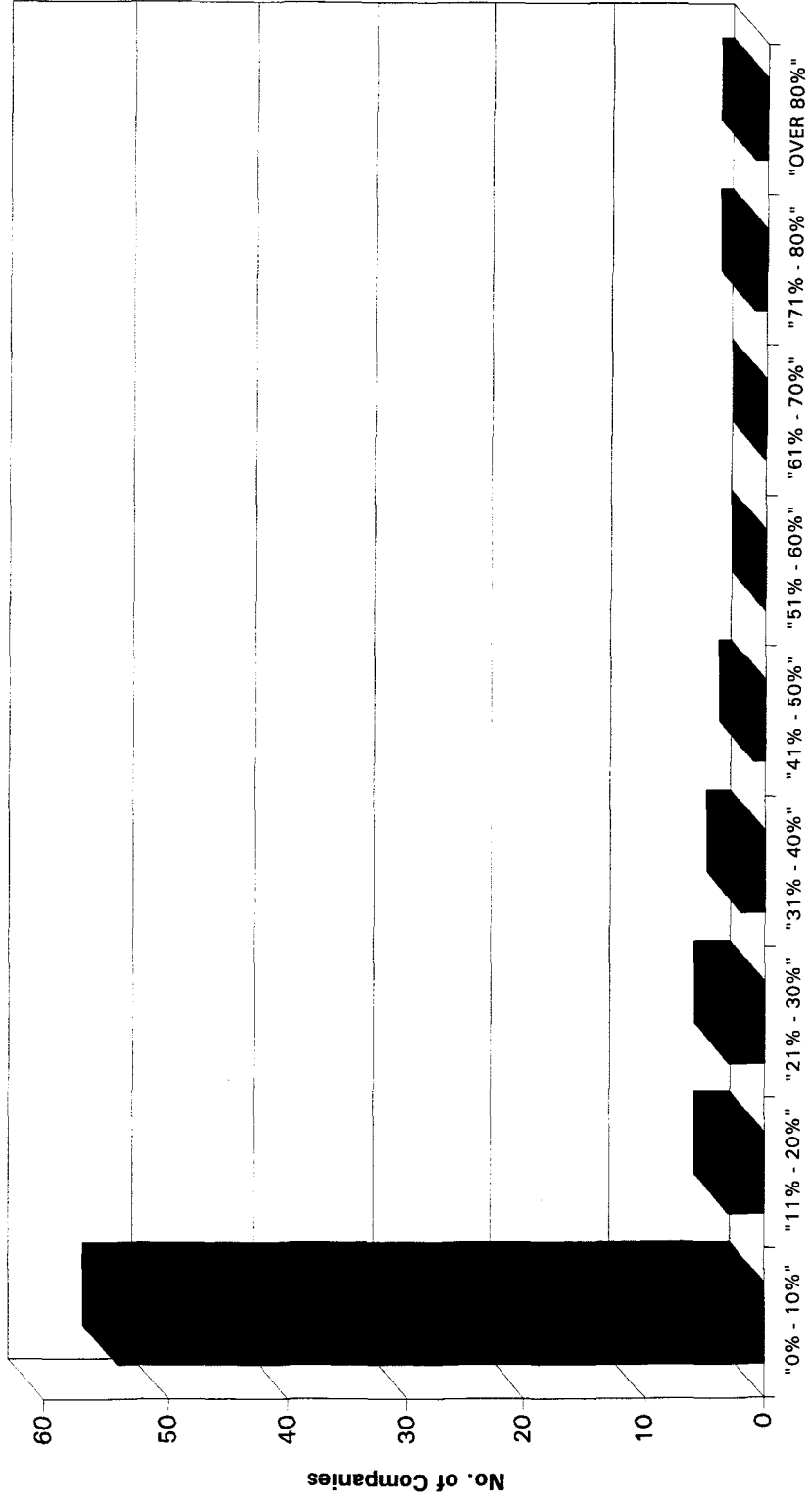
Graph 6

EU Exports %



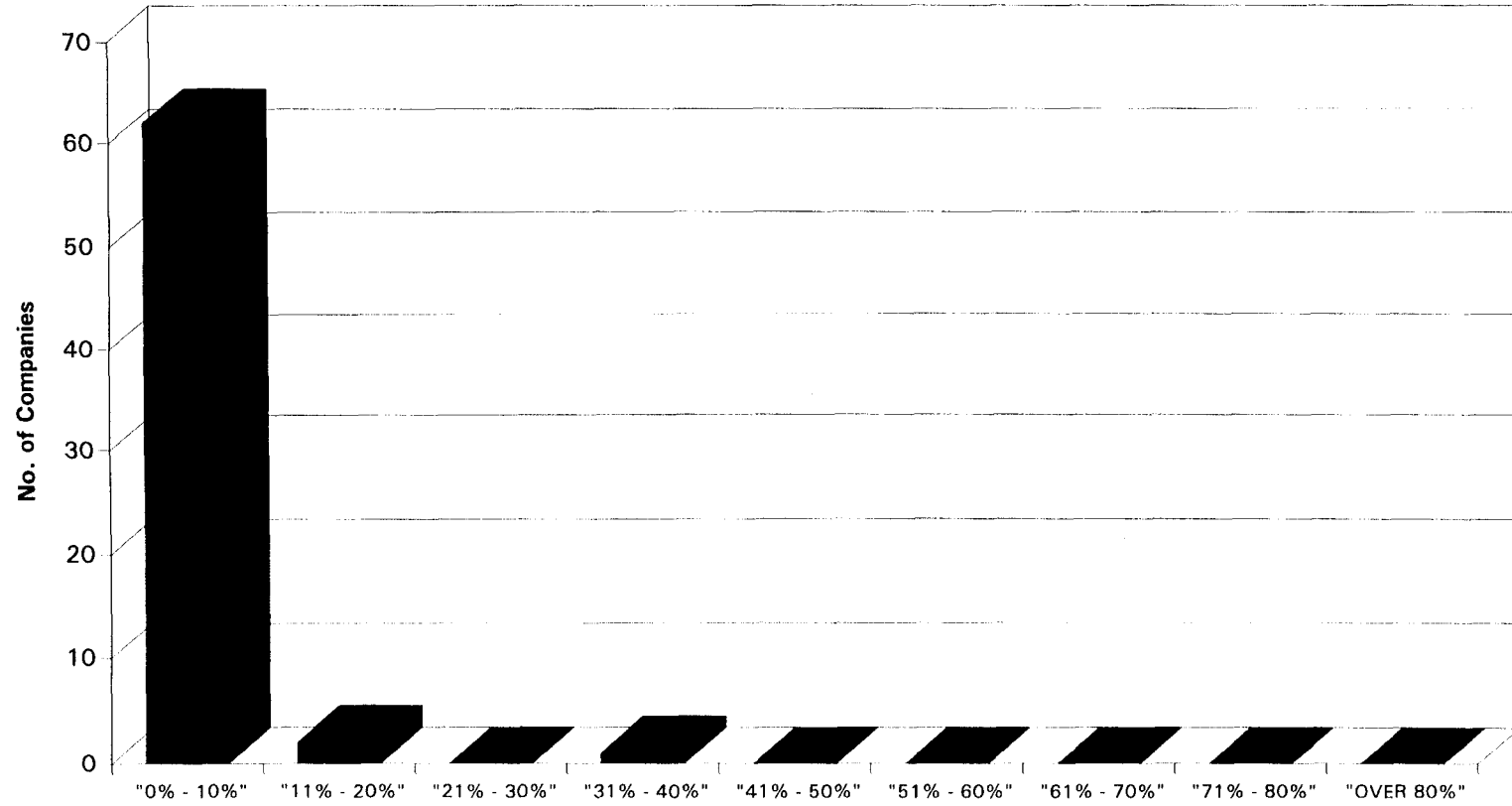
Graph 7

US Exports %

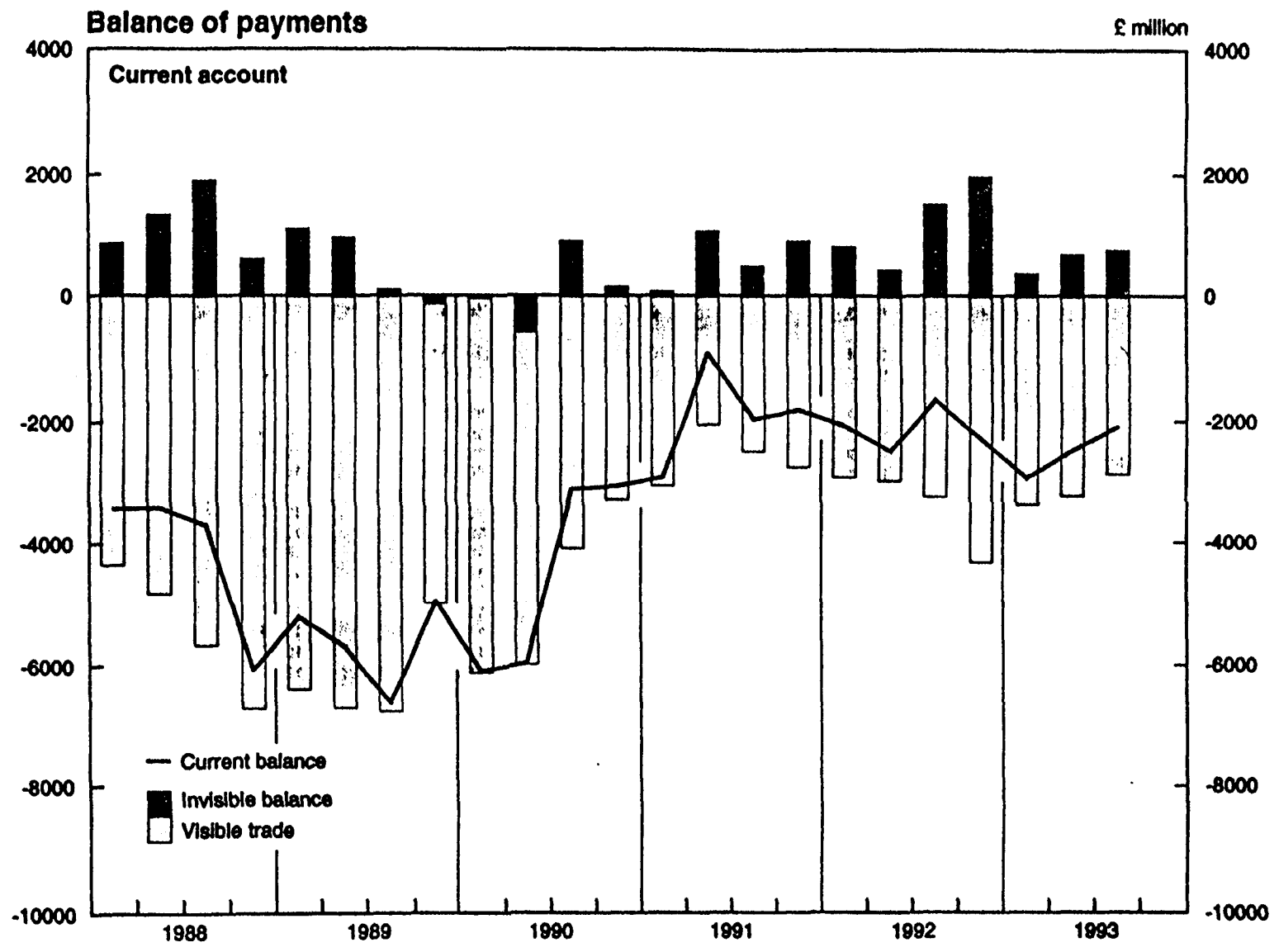


Graph 8

Japan Exports %



Graph 9



Source: CSO, Economic Trends, No. 485, March 1994

Graph 10

Competitiveness Factors Ranking

