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Un estudio multivariante de los problemas de Marks & Spencers en 2001.

Cecilio Mar Molinero [1]
[1] Becario Ramón y Cajal, Institut d'Organització i Control
Universitat Politecnica de Catalunya, Diagonal 647, Barcelona
mar@ioc.upc.es

RESUMEN

Marks & Spencers PLC, una de las mayores empresas de grandes almacenes del Reino Unido, pasó por una mala etapa en 2001. Los responsables de su gestión tomaron medidas drásticas en cuanto a su estructura, cerrando muchas de sus ramas en el extranjero y cambiando el modo de gestión de las que quedaron abiertas. Pero, ¿hasta qué punto los problemas de Marks & Spencers eran específicos a esta compañía o eran sintomáticos de un mal momento del sector? Este trabajo estudia la evolución de Marks & Spencers dentro del sector de los grandes almacenes británicos. La metodología empleada se basa en las Escalas Multidimensionales (MDS).

***Palabras clave**: Estadística multivariante, Escalas Multidimensionales, Análisis del fracaso empresarial, Gestión de grandes almacenes.*

1. Introduction.

Marks and Spencer PLC (M&S) has "long been regarded as one of the most spectacular corporate successes in the UK. It has also been widely recognized as one of the best-managed companies in Europe" [1]. It has been described as a pioneer, innovator and market leader, but it has been on the decline since 1998. Since memorably exceeding £1 billion profits in 1997 for the first time, then increasing further in 1998 to nearly £1.2 billion, M&S has not been performing well. Profits dropped sharply to £145.5 million in 2001. However, M&S is only one the companies that operate in the retail industry; it cannot be assessed in isolation. Are we seeing a company crisis or an industry crisis? Thus, the issue is whether M&S was approaching bankruptcy, or whether the industry was experiencing a low moment in the economic cycle.

2. The data.

Data was obtained on continuing and failed companies from the General Retailer sector. This sector encompasses Soft Goods, Hardware and Multi-departments. It includes M&S a Multi-department store. The list of continuing companies was taken from the London Stock Exchange (LSE) as at 31 July 2001. A DataStream search was used to find financial statement information. Only one year data was obtained for continuing companies, except for M&S, for which four year data was obtained. Failed companies were also restricted to the General Retailer sector, and to the period commencing 1990. A failed company was classified either as gone into liquidation, receivership or administration. Companies located on DataStream were checked on www.insolvency.co.uk for validity, and then double-checked on DataStream for the correct failure date. The final data set contained 69 firms, of which 63 were continuing firms and 6 were failed firms. An attempt was made to match failed and continuing companies by fiscal year, as well as by industry. Due to the small number of

companies available, insolvent firms were not matched to healthy firms by asset size. Matching has long been debated in the literature; [2, 3, 4].

Twenty-eight ratios were calculated from the DataStream data. The list was based on prior research and included ratios relating to profitability; liquidity; gearing; investment and shareholders returns. The ratios used were related to profitability (Operating Profit Margin, Return on Capital Employed, Net Asset Turnover, Net Profit Margin, Operating Profit per Employee, Sales per Employee, Staff Cost Margin, Stock Cost Margin, Cost Margin, Profit Margin); liquidity (Stock Turnover, Debtor Turnover, Creditor Turnover, Current Ratio, Acid Test Ratio, two versions of Asset Utilization, Cash Flow Margin, Cash Utilisation); Gearing (Gearing, Interest Cover); and shareholder returns (Earnings per Share, Tax Ratio, Dividend Pay-out Ratio, Return on Equity, Primary Financing Ratio, Return on Shareholders Capital, Return on Long-term Capital).

3. Analysis.

A standard problem when working with company accounts data is the presence of extreme values. There were some very discordant observations, and this justified the use of MDS since its algorithm is based on relationships of order and is robust to the presence of outliers. As a first step, Factor Analysis was used in order to explore the structure of data. In common with other studies, eight factors were identified. The first five – in order of the associated eigenvalue- were interpreted as: profitability, working capital, shareholder's returns, sales, and debt structure. No clear meaning could be found for the remaining three factors.

MDS requires the calculation of a measure of proximity between companies on the basis of financial ratios. The measure chosen was Euclidean distance between standardised ratios. Given the results of factor analysis, a representation in eight dimensions would have been appropriate, but this was not possible given the version of the package available, ALSCAL which only permitted a maximum of six dimensions. A representation in six dimensions was therefore created. MDS locates companies in the space un such a way that if two companies have very similar ratio structures they are located next to each other; and if they are very different, they are located far apart. The location of a company in the space is given by a set of six co-ordinates. In order to visualise it, it is necessary to work with projections. The projection on to dimensions 1 and 2 can be seen in Figure 1; the projection on to dimensions 3 and 4 is shown in Figure 2; and the projection on dimensions 5 and 6, in Figure 3.

The first attempt to interpret a MDS configuration is always visual inspection. We can see that failed companies tend to be located towards the left hand side of Dimension 1, the lower half of Dimension 2, and the left hand side of Dimension 3, the left hand side of Dimension 5, and the lower end of Dimension 6. M&S appears to drift towards the "wrong" side.

Two questions arise: "can we find out what is special about the different areas of the space where companies are located?" and "can we find out how the position of a company in the space is related to the value of its financial ratios?" The answer to these questions is "yes". Property Fitting, a regression-based technique, is used to do this. The results of the regression are represented by means of a directional vector of unit length, [5]. Being regression-based, the values of the regression coefficients, the β's, are influenced by the presence of extreme values. For this reason when, for a given company, the ratio took a standardised value outside the range between +2.5 and -2.5, the company was excluded from the regression. This means that a company may contribute to the calculation of some Property Fitting vectors but not to the calculation of others. All the financial ratios were treated as properties and their end points calculated. These end points were projected on Figures 1, 2, and 3. They can be seen in Figures 4, 5, 6.

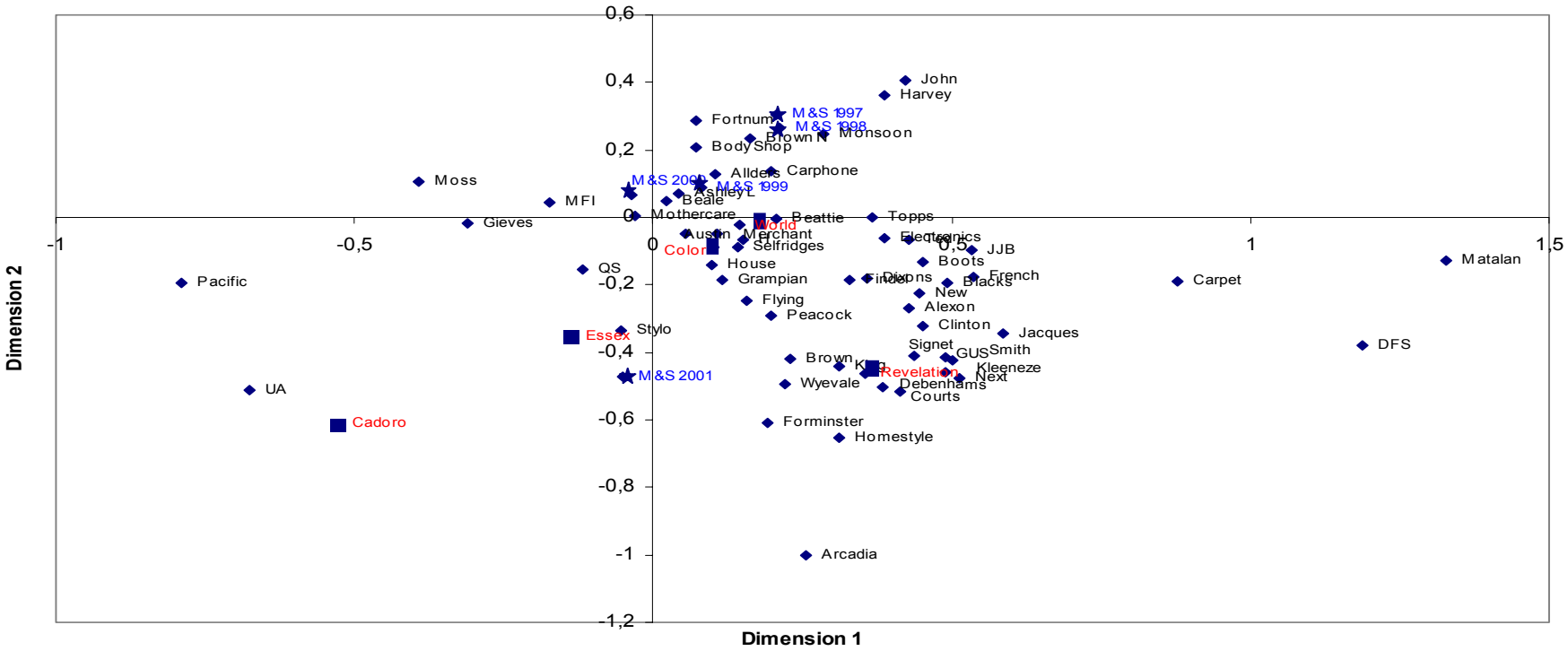

Figure1 Companies plotted on Dimension 1 and Dimension 2

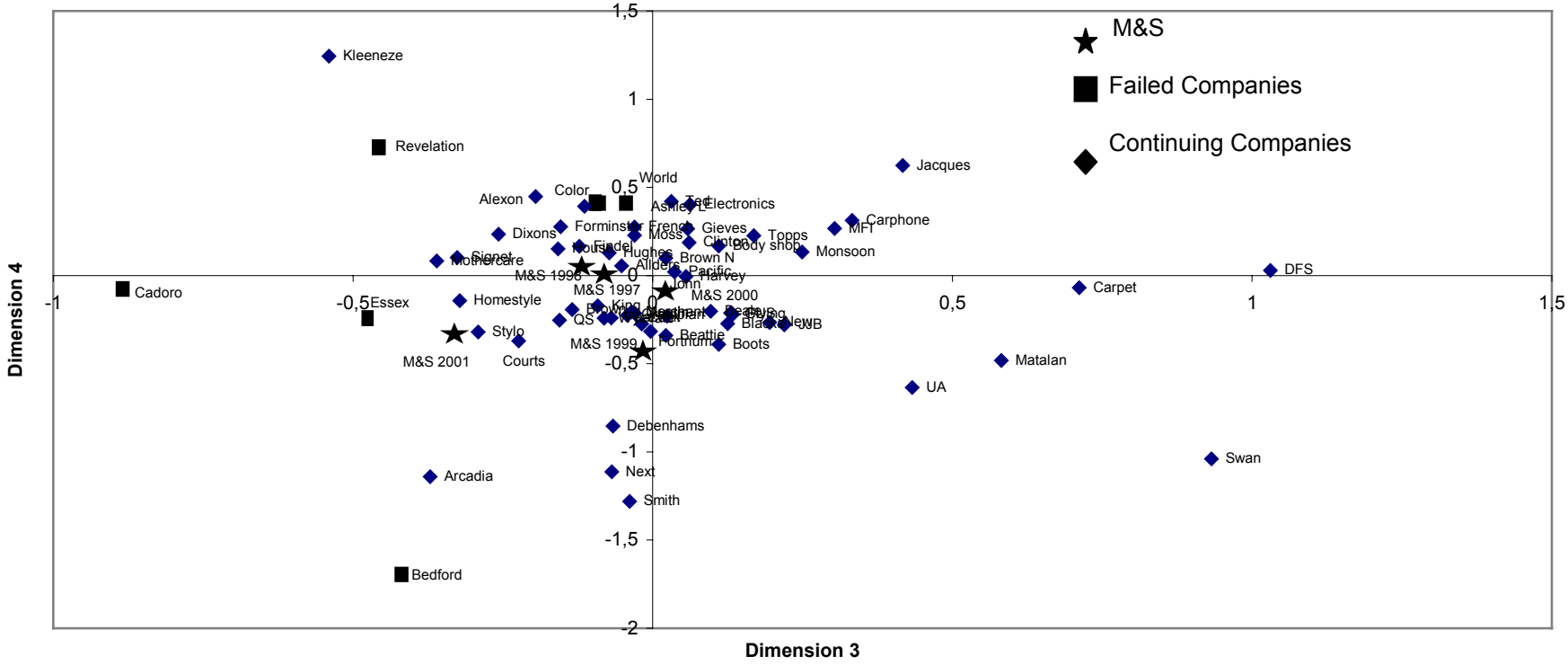

Figure 2. Companies plotted on Dimension 3 and Dimension 4

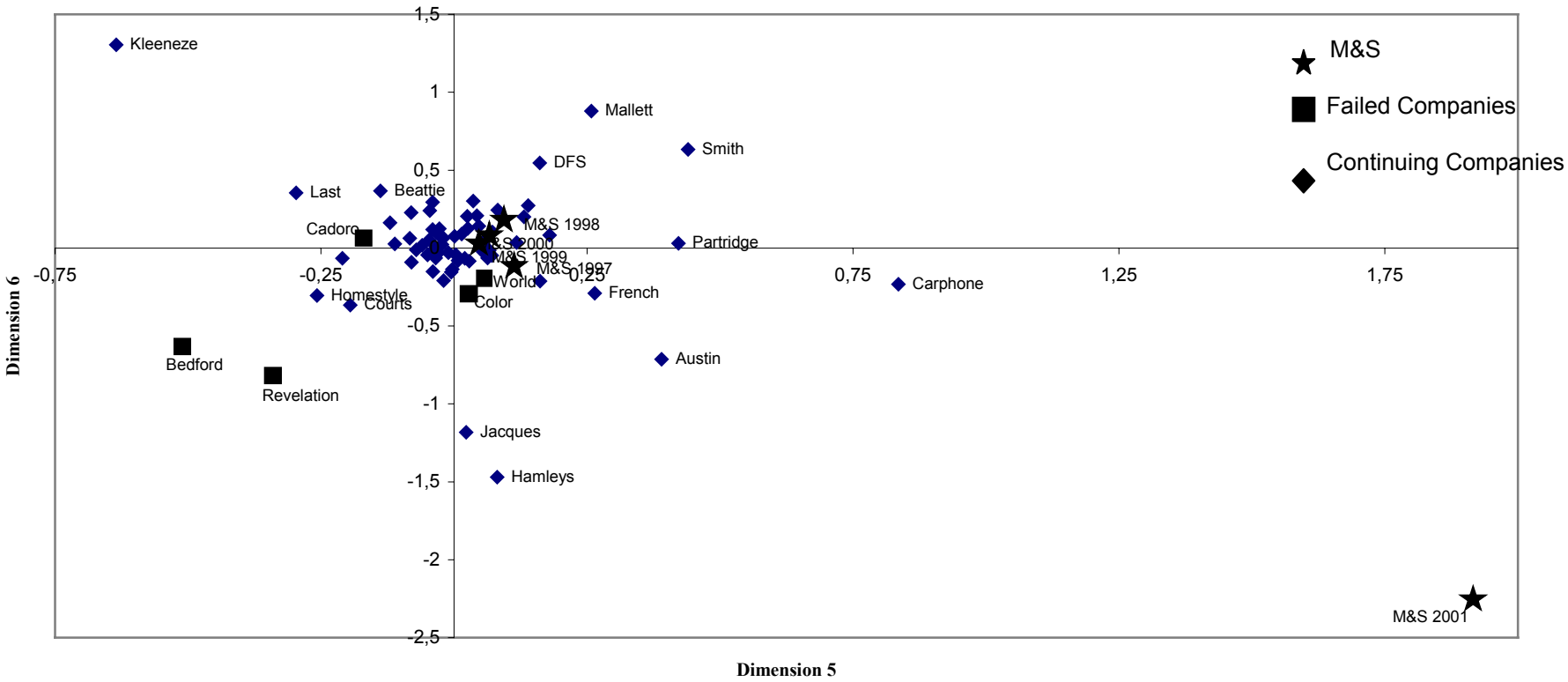

Figure 3. Companies plotted on Dimension 5 and Dimension 6

Since the directional vectors are located in a six dimensional space and we need to work with projections, the normalisation emphasises the contribution that a directional vector has on the interpretation of a configuration. If the end point of a directional vector is located at the origin of co-ordinates, this vector is orthogonal to the projection under examination and has no part in its interpretation. If the end point of the directional vector is located far apart from the origin, then this vector is important in the interpretation of the configuration.

Interpretation was based on the quality of the Property Fitting results, and on the financial ratios whose end points project far from the origin of co-ordinates. In this way, Dimension 1 was labelled "profitability"; Dimension 2, "liquidity"; Dimension 3, "market profitability"; Dimension 4, " structure of sales and capital employed"; Dimension 5, "appropriations of profit"; and Dimension 6, "debt and equity".

4. M&S in context.

We can now focus on how performance has changed for Marks and Spencer PLC over the sample period 1997 to 2001. It is apparent from Figure 1 that M&S has moved from the upper right quartile of the map, implying profitability and liquidity, in 1997 to the lower left quartile in 2001, implying that both profitability and liquidity have deteriorated with respect to other firms in the industry. In both 1998 and 1999 the move was minimal and Marks and Spencer PLC remained in the top right quartile, and then moved to the top left quartile in 2000, suggesting a reduction in profits. The move in 2001 demonstrates a large decrease in liquidity. In Figure 2, Marks and Spencer PLC lies to the left of Dimension 3 throughout the sample period suggesting low market profitability. The large 2001 shift towards to the left, appears to imply that the markets had lost confidence in its future performance, and were thinking of it as a failed company. M&S 2001 is an outlier for Figure 3; implying that spectacular changes have taken place within this company. While the majority of the failed companies lie within the main cluster of the sample, they all tend to be placed towards the left hand side of the chart. Since Dimension 5 has been interpreted to be related to appropriations of profits, this suggests that Marks and Spencer PLC made large tax and dividends payments in 2001, quite considerable for its level of earnings. This might have been an attempt to keep shareholders satisfied, something that it failed to do considering its deteriorating position in Dimension 3 (market profitability), and something that resulted in large tax payments for its level of profits. In addition to this, since the lower half of Dimension 6 is related to gearing, and since M&S has taken a very low position in this dimension, it appears that the company became highly geared in 2001.

The picture that emerges for M&S is one of a company that is loosing profitability and liquidity with respect to other companies in the industry, but trying to keep its dividend payments, and that does it by borrowing money and increasing the level of gearing. The markets are aware of this situation, and the company looses market profitability. But was M&S approaching failure? The examination of Figures 1, 2, and 3 suggests that M&S was not very different from other continuing companies and that, although it was on the lower side of the league table, it appeared not to be in the relegation zone.

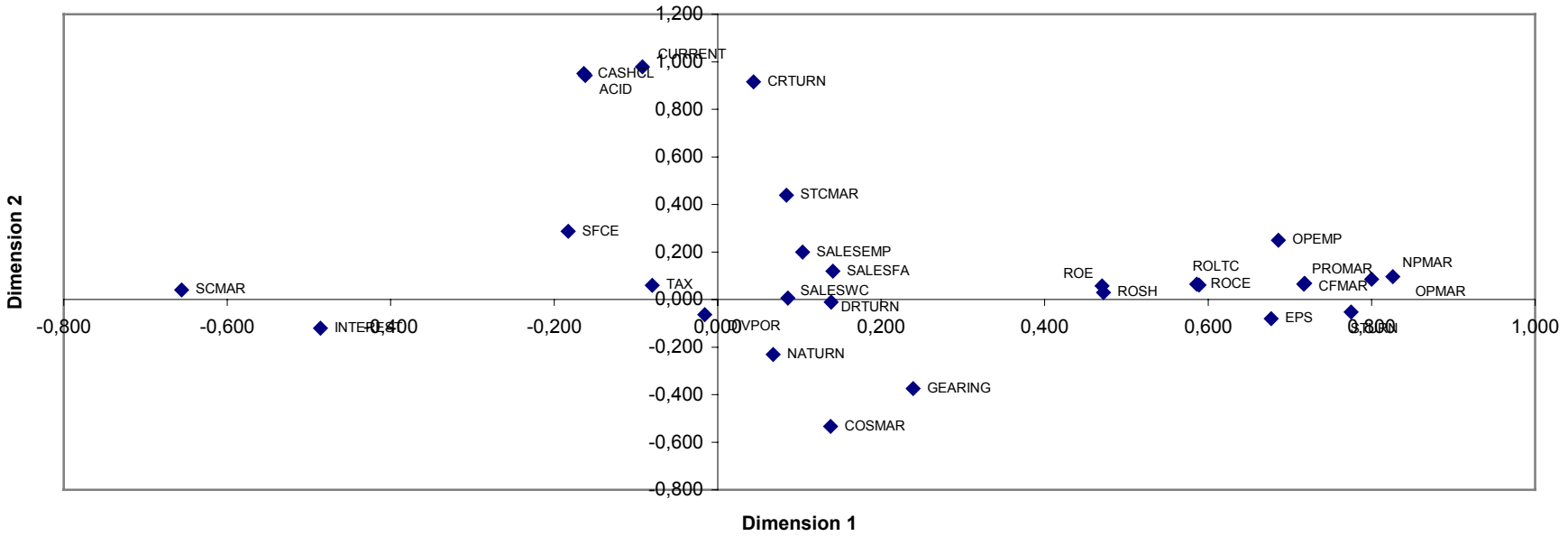

Figure 4. ProFit analysis. Projection of end points of directional vectors on Dimension 1 and Dimension 2

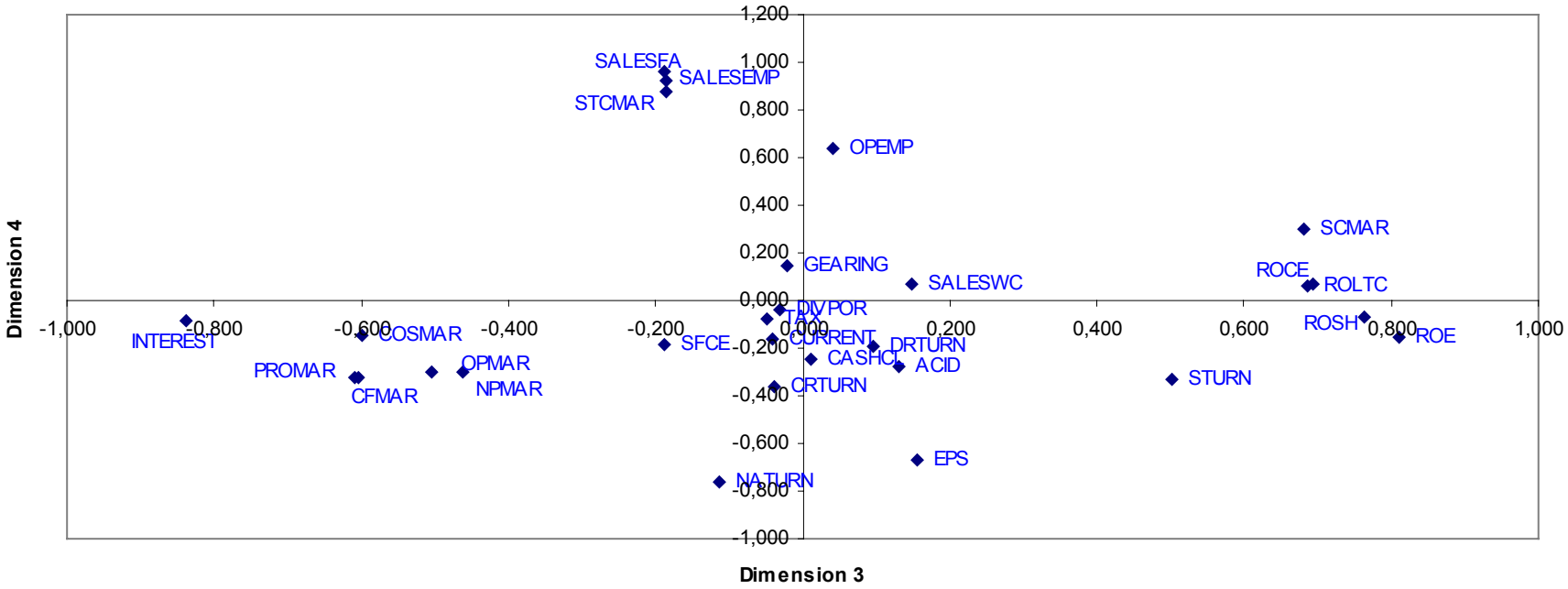

Figure 5. ProFit analysis. Projection of end points of directional vectors on Dimension 3 and Dimension 4

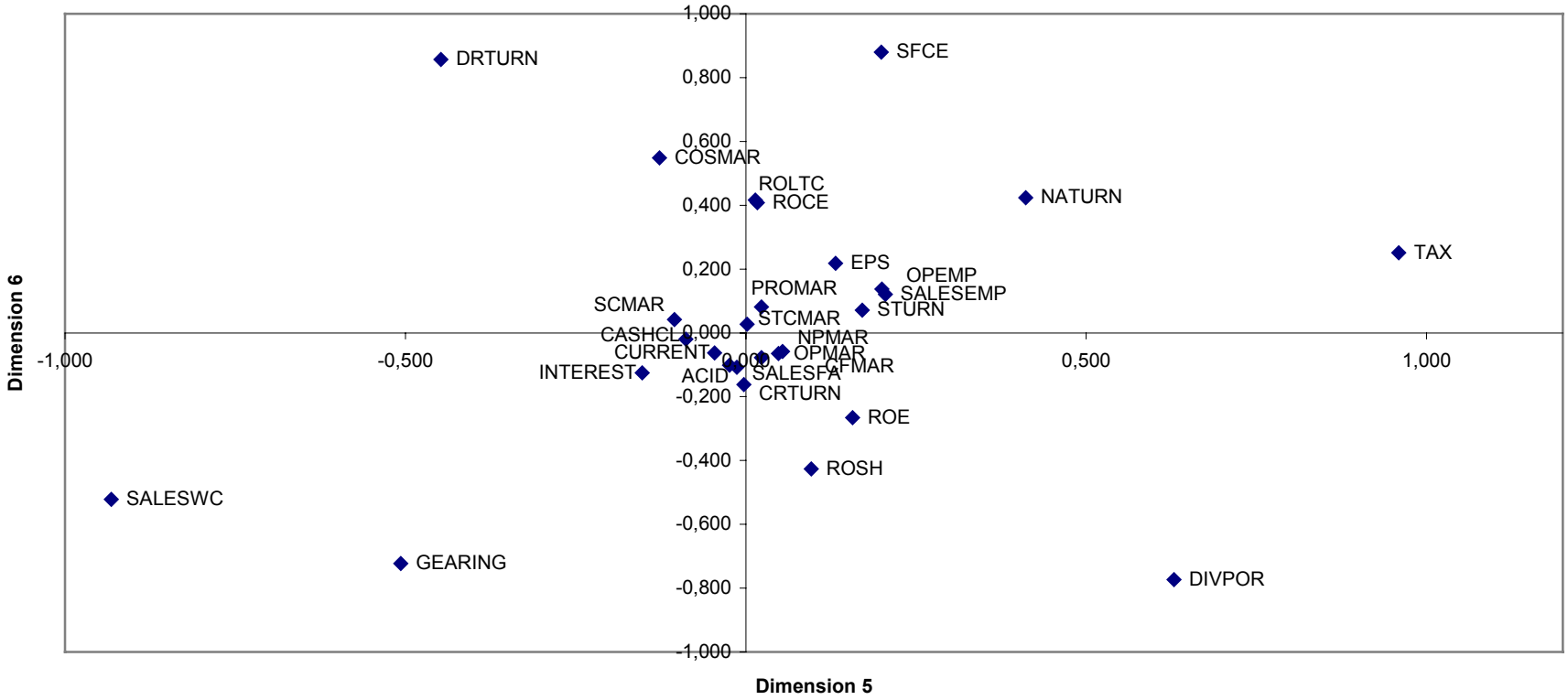

Figure 6. ProFit analysis. Projection of end points of directional vectors on Dimension 5 and Dimension 6

5. Conclusion.

This paper has concentrated on the financial difficulties of Marks and Spencer PLC. An attempt has been made to place them within the context of the industry to which it belongs. The question addressed is whether this company was facing problems that were shared by all the firms in the industry, or whether it was loosing standing with respect to other firms that engaged in similar activities. The second situation appears to have been the case, although one would be reluctant to say that M&S was approaching failure. Was this a case of a death announced and avoided, or a case of an over-reaction to a transient problem? It is impossible to say. What can be said is that keeping market profitability appears to have been a prime objective of the management.

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