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The Stability of Benefit Segments in the European Market for Cash Management Services

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MARKET FOR CASH MANAGEMENT SERVICES

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ABSTRACT

This paper examines the stability of the size and profile of benefit segments in the European corporate market for cash management services. Based on a questionnaire returned by more than 600 firms in 1996 and 1998, a relationship-oriented segment, a commitment-oriented segment, a transaction-oriented segment, and a bank rating-oriented segment are identified. The sizes and the profiles of the relationship-oriented segment and the bank rating-oriented segment are stable during this two-year period. The size of the commitment-oriented segment is reduced whereas the transaction-oriented segment has an equivalent increase in size. Further, the profiles of these two segments are slightly altered.

Keywords: benefit segmentation, stability, business-to-business marketing, cash management.

INTRODUCTION

Since the seminal article of Smith (1956) the concept of market segmentation has been central to most marketing strategy decisions. The field has been subject to elaborate research but the problem whether identified segments remain stable or are more dynamic in nature is largely neglected (cf. Mitchell and Wilson, 1998; Farley *et al.*, 1987). This is surprising considering that segment stability is important since targeting and positioning decisions depend on it. Further, results indicate that segment stability is considered important by a large percentage of firms. For example, Abratt (1993) found in a study of market segmentation practices of 32 industrial companies that the three most important criteria used to form segments were the similarity of needs within segments (88%), the feasibility of marketing action (75%) and the segments' stability over time (50%).

Some authors seem to assume that segments by nature are instable, in particular Dickson (1997) and Kotler (1997), who note that the market-segmentation procedure has to be updated often or carried out periodically. Further, Beane and Ennis (1987) state that segments may change over time and they caution that this should be considered by decision makers relying on cluster analysis studies. Finally, Farley *et al.* (1987) claim that no theoretical nor empirical findings suggest that segments are highly stable.

Other authors argue that certain segments might be highly stable. For example, Wind (1978) notes that the more general the basis used for segmentation, the more stable are the derived segments, and Malhotra (1989) suggests that both the a priori and the cluster-based segmentation methods exhibit a high degree of stability. However, he notes that in the case of a small number of units,

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cluster-based segments derived from a large number of variables could lead to instability of the segments.

For financial service providers using survey results of customers' criteria for choice of bank, it is crucial to the value of these surveys that the results exhibit a reasonable stability over time. Otherwise, segments derived from such market analyses will be unstable, and segmentation practices that result in unstable segments are at best worthless and in the worst case scenario subsequent targeting and positioning descisions are inexpedient.

This paper focuses on how stable the criteria for choice of domestic cash management banks are over time and how stable the segments that can be formed on the basis of these customer criteria are. The paper compares the results from a survey conducted during the first six month of 1996 (cf. Birks, 1998) with the results of a similar survey conducted in the first half of 1998. The average rankings of the choice criteria for the two surveys are compared, and the internal and dynamic stability of the segments derived from the choice criteria are investigated.

BACKGROUND

As mentioned already by Wind (1978) and Calantone and Swayer (1978), segment stability is a neglected area of research. Later, Plank (1985) in his review of industrial market segmentation noted that he had not located any suggestions for or actual longitudinal work on segment stability, and he concluded that the area has been ignored both conceptually and empirically - a notion which is later supported by for example Mitchell and Wilson (1998) and Rao and Wang (1995). In the light of this craving for further research, it is surprising that, with one exception, no

published research has dealt with segment stability with reference to the pioneering work of Calatone and Sawyer (1978) on the stability of benefit segments. The exception is Farley *et al.* (1987), who segmented a mature market for a low-cost consumer product using a disaggregate consumption model to investigate the degree of stability in segment membership. Industrial marketing scholars seem to have ignored the topic in spite of e.g. Mitchell and Wilson's (1998) and Dickson's (1997) recognition that the volatility of industrial markets makes it important to keep market segments under constant review.

Types of segment stability

There are at least three ways of perceiving segment stability, one of which is internal stability (Calatone and Sawyer, 1978). The issue is in part to delineate whether independent samples from a given time period result in consistent segment solutions in terms of the nature and number of identified segments. Another consistency aspect is to which extent the various means of analysis yield reliable cluster solutions - a question which can be resolved by split-half procedures (Malhotra, 1996). Split-half procedures have the advantage that they eliminate the problem of segments existing in the samples but not in the world at large (Haley, 1985). Internal stability is important because the scope of targeting and positioning decisions requires that they are based on the best available knowledge, and consequently no solution should be accepted without the assesment of its reliability and validity.

A second form of stability is dynamic stability, which deals with the issue whether identified segments at a given time remain unchanged over time in terms of number, size, and profile, e.g. demographic characteristics and sought benefits. This kind of stability has targeting and positioning implications because for example segment sizes influence the profitability of specific

segments and thus prior decisions concerning the choice of which segments to target may turn out to be inexpedient. Likewise, the existence of segments with volatile profiles complicates the process of determining the appropriate marketing mix. In the segmentation of a retail banking market, Calatone and Sawyer (1978) found evidence supporting the hypothesis that the set of important benefits for each segment remained unchanged over a time span of 2 years. However, nothing indicated that segment sizes or demographic characteristics were dynamically stable.

Finally, a third type of segment stability is membership stability, i.e. to which extent individual buyers are members of a given segment for several succeeding time periods. This is an important aspect of stability provided that certain customers are more important than others in terms of profitability, volume or prestige. Farley *et al.* (1987) reported a low degree of membership stability in a mature consumer market, where less than 50% of the repondents were in the same segments for two successive periods. The finding of segment membership instability is in accordance with Calatone and Sawyer (1978), who concluded that segment membership was independent of any previous classification, and that as few as 28.8% of the consumers remained in the same segment during a time span of 2 years.

The importance of segment stability

Both practical (Abratt, 1993) and theoretical criteria (Malhotra, 1989) indicate that it is desirable and important that segments are stable over time and that stability is needed because it takes time to implement a new strategy which is based on the existence of certain substantial segments (Farley *et al.,* 1987). An underlying assumption seems to be that firms lack the knowledge and information needed to control or predict developments in segment sizes and profiles. However, if segments have been highly stable, an immediate prediction is that they will not change in the near

future. Another assumption seems to be that firms need to make long-term investments in assets which are segment specific and that such investments require a high degree of stability, because segment specific investments are worthless if the segments cease to exist. On the other hand, short-term investments in segment specific assets only require that the segments are so stable that the investments can be paid back before the segments are no longer substantial enough to warrant any attention. However, these considerations ignore the advantages of instability to a company that understands its nature. If the instability is receptive to control or the developments in the segments' sizes and profiles are predictable, segment instability might neither be problematic nor undesirable.

Dickson and Ginter (1987) argue that it is possible to alter the functional relationship between perceived product characteristics and demand. As a special case of such a demand function modification, they identify a segment development strategy which involves alteration of demand functions of a subset of consumers so that they become similar and constitute a unique market segment. Also Farley *et al.* (1987) conclude that there is evidence that marketing activities have an impact on segment membership. For example they found that heavy advertising tend to inhibit segment switching whereas promotion alone seem to encourage a switching into price-sensitive segments.

Thus, segment instability might be a result of competitive activities and thus in many markets probably controllable by a few major, innovative firms. These firms may aim at creating segment instability in order to increase their own share of the market. On the one hand, they want membership stability in the segments that they are targeting, i.e. they want to retain their present customers. On the other hand, they also want to attract new customers, who - if succesful - will

create segment instability, because customers are switching from segments targeted by competitors to segments targeted by themselves. Also companies entering a market characterised by high segment instability might consider this as an advantage because high stability would pose an entry barrier.

METHOD

As part of a comprehensive questionnaire dealing primarily with issues related to technical aspects of cash management systems, corporate customers' criteria for allocating business between their existing banks were surveyed in both 1996 and 1998. The questionnaires were designed on the basis of studies of cash management practices in 1994 as well as on information available from a pilot questionnaire and interviews with bankers and corporate treasurers (cf. Birks, 1998).

During the first half of 1996, the questionnaire was sent to 5228 firms representing the largest firms measured by sales for non-financial companies and assets for non-bank financial companies in 17 European countries. A total of 1072 partially or fully completed questionnaires were returned, corresponding to a 20.5 percent response rate. In the first half of 1998 a similar questionnaire was sent to 5800 firms representing the largest firms in the same 17 European countries. A total of 1065 partially or fully completed questionnaires, corresponding to a 18.4 percent response rate, were returned. For both years, the response rate differed from country to country, which indicates that non-response bias might be a problem.

The surveys were undertaken by local business schools and universities in order to improve the access to the firms in the respective countries. The questionnaire enclosed a covering letter from

the appropriate school addressed to the most appropriate person identified in the firm. These key informants were typically treasurers and cash managers. In some of the countries the questionnaire was translated into the respective languages. The sending out of the questionnaire to the recipients were followed up by a telephone chase for its completion and return.

The 1996 and the 1998 survey followed a similar methodology but the questions asked were slightly changed. Figure 1 and Figure 2 show the wording of the questions in the 1996 and the 1998 survey respectively. Both questions were asked regarding domestic bank cash management services.

< Take in Figure 1 >

< Take in Figure 2 >

The rank order scale of the questions forces the respondents to rank their criteria. However, this might misrepresent the true weight assigned to the criteria, since a number of criteria might be equally important or unimportant. The advantage is that the respondents have to consider all possible criteria instead of just answering that all prespecified criteria are highly important.

ANALYSIS AND RESULTS

Initially, Table I was inspected, confirming that service quality, pricing and relationship are the three most important criteria for choice of cash management banks in both 1996 and 1998. Several studies of customers' criteria for choice of bank have been published during the last twenty years

(cf. Ennew and McKechnie, 1998) supporting the results in Table I and thus indicating that the survey results are reasonably reliable and stable. For example, the results are in accordance with both Turnbull (1982a), who reported that reliability, prompt decisions and the willingness to lend are the three most important criteria used by medium- and large-sized UK firms for evaluating banks, as well as with a study of 30 British firms' use of foreign banks by Turnbull (1982b), who found that the quality of services was the most important selection criterion. Outside the financial services sector, empirical studies of evaluation methods of suppliers for industrial buyers (cf. Chéron and Kleinschmidt, 1985) have shown that criteria such as quality, price, delivery and reputation are important for most buyers.

< Take in Table I >

Less important criteria like level of commitment and technology do not exibit the same level of stability. Thus in 1996, technology was considered the most important criterion by 3.7% of the respondents, whereas a similar question in 1998 resulted in 12.1% of the respondents ranking it as the most important choice criterion. However, this result is probably due to the different wording of the question in 1998, where the criterion 'technology' was changed to 'electronic banking system' (cf. Figure 1 and 2). This might thus indicate that the questions in the 1996 and the 1998 survey are not necessarily interpreted in the same way.

The indentification of segments

To ensure comparability, missing values were replaced with a number representing an unranked choice criterion and subsequently we deleted questions that were not answered strictly in accordance with the directions in the questionnaire, i.e. not ranking five criteria or assigning the

same rank to more than one criterion. Then the open part of the question was eliminated due to the miscellaneous nature of the category and because this choice criterion had the least mean importance ranking (5.87 in 1996). In the attempt to reduce the complexity of the 1996 data-matrix and eliminate potential redundancies in intercorrelated variables, a principal component analysis was conducted suggesting that the nine criteria could be reduced to five factors. However, the extracted factors were only able to explain 69% of the total variance, and the Kaiser-Meyer-Olikin measure of sampling adequacy (KMO = 0.0328) was under the recommended threshold of 0.5, indicating that factor analysis was not appropriate (Malhotra, 1996). Futhermore, the questions were measured using an ordinal type scale making factor analysis less appropriate. Similar findings were found to be true for the 1998 data (KMO = 0.0225), and therefore it was decided not to use the extracted factors in the subsequent analysis.

The next step was to identify a manageable number of homogeneous customer segments. According to Haley (1985) this number should be less than seven due to marketing teams' difficulty in keeping more than about six segments clearly in mind. Because the choice criterion "reputation for cash management" used in 1996 was substituted with the different choice criterion "EDIFACT capability" in the 1998 questionnaire (cf. Figure 1 and 2), these criteria were not included in this part of the analysis. In their review of the market segmentation literature, Beane and Ennis (1987) found support for the notion that cluster analysis is superior to regression analysis, factor analysis and automatic interaction detector concerning market segmentation. This finding made us choose cluster analysis when forming customer segments. To maximize the homogenity within the clusters and the heterogeneity between them, Ward's method of minimum variance was used. This hierarchical clustering method has been shown to perform better than other clustering procedures (Milligan, 1980).

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In order to ensure an acceptable internal stability, both the 1996 and the 1998 data were split into two samples of an equal size. To decide the number of clusters, the data from 1996 was inspected for local peaks in the cubic clustering criterion and the pseudo F-statistic and drops in the pseudo t^2-statistic, but no consensus among the statistics could be found for a manageable number of segments. However, for both split-half samples of the 1996 data, some evidence in favor of a four cluster solution was found. A large drop in the pseudo t^2-statistic was found at a stage where four clusters remained followed by a larger pseudo t^2-statistic for the next cluster fusion, i.e. the three segment solution. Also, one of the split-half samples had a pseudo F peak at the four cluster stage. Based on correlations of mean importance of benefits, similar segments from each half were then coupled. Both Kendall's tau-b and Pearson's correlation coefficients showed significant correlations and an identical matching of split-half segments (average Pearson r = 0.9502, n = 8, p < 0.0005).

A procedure similar to the one used on the 1996 data was used for the 1998 data and it resulted in four clusters for both split-half samples according to the pseudo F and pseudo t^2 statistics. Again correlations of mean importance of benefits were used to couple identical segments from the two halves resulting in statistically significant correlations (average Pearson r = 0.9366, n = 8, p < 0.0005). Despite that formal procedures for assessing the reliability and validity of the cluster solutions are not totally unquestionable (cf. Malhotra, 1996), the fact that for both years the split-half procedure yielded similar clusterings and that coupled segments' means were highly correlated indicate that the data have an acceptable reliability and internal stability.

In order to identify how segments in the 1996 sample corresponded to segments two years later, correlations of mean benefit importance were calculated. This resulted in an almost perfect match

since all correlations were statistically significant and with one exception well above 0.9 (cf. Table II, average pearson r = 0.9458, p < 0.0005). Since the number of segments have remained unchanged over time and given the high correlations between mean benefit importance, it seems reasonable to conclude that the market for cash management services consists of four generic segments and that in this respect, the market is stable. It is also noteworthy that most of the benefit segmentation studies in which Haley (1985) has been involved, derived four segments.

< Take in Table II >

Because the derived segments should be relatively homogeneous, it is reasonable to describe them by mean values of ranking for the eight purchasing criteria (cf. Table II). Before we turn to discussing the individual segments, note that the four segments seem to fulfil the criterion of substantiability set forth by Kotler (1997).

The relationship-oriented segment

For both years, this segment consists of around one third of the respondents. It is characterised by a high emphasis on a good relationship with the bank, pricing and service quality, though pricing becomes slightly less important in 1998. The segment members are less interested in credit ratings, electronic banking systems and reputation than the average respondent. Though service quality and pricing are important and perhaps even a requirement for maintaining the relationship, a good relationship is much more central for companies in this segment than in any of the other three segments. Thus, in this segment it is important to have a close and personal relationship with the bank and to be able to turn to the bank when a company needs specialised knowledge and help for the solution of complex financial problems. The service or the product exchanged in the

individual transactions are less important than the whole relationship and its history.

The commitment-oriented segment

The second segment differs by emphasising that the cash management bank has a high level of commitment to the company's business. This distinguishing characteristic is especially strong in 1998 when commitment is the most important cirterion. The survey showed that, on average, the level of commitment to the customers' business is the fourth most important criterion for choice of cash management bank (cf. Table I). A bank's level of commitment to a company's business can be viewed as the customer's security that the bank will try to deliver the best customised products, not only now, but also in the future (cf. Moir, 1988). This is important when the investments made by the buyers in the cash management system in terms of hardware, software, time etc. are relationship-specific, i.e. without value or with a significantly lower value when the relationship is terminated. In such cases, a high level of commitment to the company's business is a safeguard that the bank seeks to provide an ongoing stream of suitable services. Besides commitment, a good relationship, pricing and service quality are relatively important criteria for the members of this segment. The size of the segment is reduced from 32.5% of the market in 1996 to 22.7% of the market in 1998. This is a remarkably large reduction in segment size and there is probably a close connection between this tendency and the large changes in importance attached to the level of commitment and technology from 1996 to 1998.

The transaction-oriented segment

For both years, this segment differs from the other segments by emphasising pricing, service quality and technology or a good electronic banking system. Criteria such as a good relationship with the bank, level of commitment and compensation for other services are ranked less important

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than by the average respondent. Thus, the segment is dominated by buyers who regard banking services as highly comparable and to whom it is important not to become too dependent on a single bank. They regard each transaction as independent and do not value long-term relationships. Attempts at cross-selling is avoided and the basic underlying attittude is that banks are opportunistic and have to be controled by competition, i.e. the market forces. The size of this segment raises sharply between 1996 and 1998 and on the face of it, it seems that the changes in segment size may occur because customers from the commitment-oriented segment in 1998 have been classified as belonging to the transaction-oriented segment. Regarding the importance attached to the different choice criteria, it is noteworthy that the importance of a good relationship and technology is much higher in 1998 than in 1996 and that there seems to be an opposite tendency for branch network and level of commitment.

The bank rating-oriented segment

Banks' credit rating is the most important criterion for this segment comprising 12.9% of the customers in 1996 and 15.1% of the customers in 1998. Bank ratings, i.e. credit ratings, can be regarded as explicit measures of reputations or as measures of the risk connected with using a bank. This is probably only an important criterion if corporate customers fear that their bank will fail. Probably because the knowledge of the individual bank is limited, buyers in this segment have to rely more on signals such as credit ratings and reputation than buyers in other segments. Besides credit ratings, pricing and service quality are other important choice criteria. The changes in importance attached to the different benefits are minor except for technology, which becomes more important with an average ranking of 5.21 in 1996 and 4.65 in 1998.

THE STABILITY OF SEGMENTS

Because the described split-half procedure has shown a satisfactory internal stability, only questions whether the average importance of choice criteria and the segment size change over time remain.

Choice criteria/benefits

A MANOVA test comparing the vectors of the mean importance of benefits for 1996 and 1998 showed that an overall group difference was present, i.e. the importance the respondents of 1996 attached to the various choice criteria changed over a two-year period. Results of the overall MANOVA test as well as univariate ANOVA tests are shown in Table III.

< Take in Table III >

The findings raise questions as to what causes the instability of choice criteria's average importance. Errors may occur because of the changes in the wording of the questions in the two surveys. This effect may be magnified if the clustering procedure is very sensitive to small changes in the buyers' ranking of their choice criteria. However, the split-half procedures for both the 1996 and the 1998 data indicated an acceptable reliability and internal stability, which is also a sign that the clustering procedure is insensitive to small changes in the buyers' ranking of choice criteria.

Other potential sources of errors are non-response biases of different kinds caused by low response rates and the fact that the samples were not totally similar between the two surveys. However, this latter source of error was investigated by comparing the respondents from 1996 to

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the respondents from 1998 on group annual world-wide sales, company annual domestic sales, number of countries in which the group operates and on geographical location. No significant differences were found regarding group sales ($\chi^2(7) = 5.69$, p = 0.5760), company domestic sales ($\chi^2(7) = 9.31$, p = 0.2320) and number of countries in which the group operates ($\chi^2(7) = 1.73$, p = 0.7850). The differences in number of responses from different countries for the two years were caused by differences in number of responses from Belgium[1] with 71 usable responses in 1996 and 26 in 1998, France with 16 usable responses in 1996 and 31 in 1998 and the Netherlands with 27 and 70 usable responses in 1996 and 1998 respectively. The respondents from these three countries were compared to the respondents from the other countries regarding their distribution on the four segments in 1996 and 1998. A chi-square test registered no significant differences ($\chi^2(7) = 12.35$, p = 0.0897), which indicates that the segment instability is not due to a different number of responses in the two surveys for particular countries.

Many small segments may give results that indicate a high instability but with only four large segments and many observations, this is probably not the cause of the observed instability. Finally, the instability might be due to actual shifts in the buyers' choice criteria over the two-year period. This may be explained by different kinds of changes in the banks' competitive activities or other environmental conditions which may disturb the segment stability (Wind, 1978). If these explanations are true, a shorter time span between the two surveys would probably have resulted in a higher stability.

Segment sizes

A chi-square statistic was used to test whether the segment sizes in 1998 differed from those of 1996. It showed that the two distributions were significantly different ($\chi^2(3) = 29.50$, p < 0.0001)

implying that segment sizes are instable. This finding is in accordance with Calantone and Sawyer (1978), who found statistically different segment sizes across a span of two years. The result has major implications for banks' targeting decisions because the attractiveness of segments according to Kotler (1997) should be evaluated in terms of sizes and growth. Another important aspect to consider when deciding on which segments to target is the profitability of each segment. Because segment sizes could influence the profitability of a particular segment, targeting decisions may turn out to be risky when size instability is present. In this scenario, targeted segments may be smaller than expected at the time of the targeting decision and hence the proces of making long-term strategic decisions and investments is complicated considerably.

DISCUSSION AND CONCLUSIONS

Instability is a matter of degree, and the observed changes in segment sizes are only substantial enough to warrant attention if they significantly alter the profitability of the marketing actions of a specific firm. Thus, even though the changes in segment sizes and profiles found in this study are statistically significant, they are not necessarily extensive enough to require any alterations of the firms' marketing strategies. They might be so small that they neither affect the strategic decisions of the banks nor influence the competitive advantage of any of the banks operating in this market.

As observed by Dickson and Ginter (1987), marketing research has concentrated on the identification and analysis of market segments, whereas the identification of opportunities for segment development has been out of focus. Hence, the results may be interpreted in two different ways: One interpretation takes the market segments as given or as being formed independently of seller activity. Thus, it is not considered possible for the seller to alter the sizes and shapes of the

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market segments. Another interpretation views changes in the market segments as a result of seller activity. Thus, it is the competing firms which together influence the sizes and profiles of the market segments through different kinds of promotion and manipulations of the other aspects of the marketing mix.

The first interpretation leads to a focus on market surveillance and monitoring, and the conclusion is likely to be that for segments such as the relationship-oriented and the bank rating-oriented segments, which exhibit a high degree of stability in terms of size and most important choice criteria, it is posible for sellers to create and implement long-term marketing strategies and thus dedicate resources for purposes with a pay-back period of more than one-two years. It also reduces the need for a frequent market analysis and segmentation. In case of instable segments, such as the commitment-oriented and the transaction-oriented segments, the more long-term investments in these segments are connected with a higher risk, and market surveillance becomes an important task. Thus, shorter pay-back periods may be relevant for investments on such instable markets and it becomes crucial to be able to predict eventual developments in the sizes of the market segments and the appearance of new segments with different needs and wants. Of course, the applicability of these recommendations will depend on the type and the degree of segment instability.

The second interpretation leads to a focus on competitor activity. Thus, competition becomes a battle between different firms in order to differentiate their offerings and maximise the size and shape of their targeted segment and hence achieve market segments that are substantial and for which competition is weak. In this case a high stability is either a sign that competitors are equally able to make customers switch from segment to segment, or that customers are very difficult to

influence and that the market activity should be directed at retaining present customers because of the high costs of attracting customers from other benefit segments. Thus, the results might in part be seen as depicting present bank strategies. Hence, the study could indicate that only transaction-based strategies have been successful in attracting many new customers on the European market for cash management services or that in Europe, most banks are pursuing a transaction-oriented strategy, competing on price and quality, while fewer banks have been able to successfully compete by committing themselves to the business of their customers. The banks targeting the relationship-oriented and the bank rating-oriented segments have not been able to alter the sizes and the profiles of these two segments to the same degree.

Future research

The results of our study indicate that the stability of benefit segments on the industrial market is lower than usually assumed in the literature on segmentation. This result is in accordance with earlier results on the stability of benefit segments on the consumer market (Calantone and Sawyer, 1978; Farley *et al.*, 1987). However, the result is surprising when considering that no earlier empirical studies on segment stability on the industrial market have been reported and that an earlier study of market segmentation practices found that the third most important criterion used to form segments was the segments' stability over time (Abratt, 1993). Thus, there seems to be an important but neglected area for future research in examining the segment stability on different industrial markets.

The study observes a moderate instability but is complicated by several possible sources of this instability. One source might be the changes in the wording of the questions. A second source might be the sensitivity of the clustering method combined with the changes in the wording of the

questions. The third possible source is an actual segment instability due to changes in the environment, for example changes in competitive activity among the banks (Dickson, 1997). At present, it was not possible to investigate individual respondents' segment membership stability. Such an investigation would, however, provide additional information on the nature of the segment instability and the switchings between different segments. Further, segmentation research is at a state where one is left to speculate on the possible stability effects of other bases of segmentation, and further research on this subject might be appropiate.

Finally, it was argued that it is unimportant how stable the segments are; rather it is important that the changes in the segment sizes and profiles are predictable. This gives two possible roads for future research. One is to focus on the stability-instability of different segments in different markets as done in this paper. However, a more fruitful but also more difficult approach may be to concentrate on developing tools for predicting developments in the size and profile of different segments. Such an effort may have to be combined with work on the effect of different segment development strategies.

NOTES

1. Due to only two usable responses from Luxembourg in 1996 and none in 1998, Luxembourg and Belgium have been regarded as one country in this paper.

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From the following list, please rank the TOP 5 criteria that you use in allocating business between your existing banks. (1=most important criteria down to 5=5th most important)

( ) Relationship   ( ) Domestic branch network
( ) Pricing   ( ) Reputation for cash management
( ) Service quality   ( ) Level of commitment to your business
( ) Bank ratings   ( ) To compensate for other services (e.g. provision of credit)
( ) Technology   ( ) Other (please state) _____

Figure 1 - Question asked in 1996

From the following list, please RANK the TOP 5 criteria that you use in ALLOCATING cash management business between your existing banks. (1=most important criteria down to 5=5th most important)

( ) Good relationship with bank   ( ) Domestic branch network
( ) Pricing   ( ) EDIFACT capability
( ) Service quality   ( ) Level of commitment to your business
( ) Bank's credit ratings   ( ) To compensate for other services (e.g. provision of credit)
( ) Electronic banking system   ( ) Other (please state) _____

Figure 2 - Question asked in 1998

Choice criteria	Most important		2nd most important		3rd most important		4th most important		5th most important		Not ranked	
	1996	1998	1996	1998	1996	1998	1996	1998	1996	1998	1996	1998
Relationship	23.1%	24.3%	14.6%	14.9%	17.8%	15.5%	15.8%	13.6%	10.5%	11.1%	18.2%	20.7%
Pricing	30.2%	29.9%	26.3%	25.5%	16.7%	17.3%	10.7%	8.2%	4.7%	6.2%	11.4%	12.9%
Service quality	32.3%	37.3%	27.2%	24.5%	16.7%	16.9%	9.1%	9.1%	5.7%	4.1%	9.0%	8.2%
Bank ratings	5.8%	8.2%	6.2%	6.2%	5.8%	4.4%	8.2%	6.0%	15.2%	10.8%	58.9%	64.5%
Technology	3.7%	12.1%	6.7%	13.0%	15.4%	12.0%	15.2%	16.0%	15.8%	13.9%	43.2%	33.1%
Domestic branch	6.7%	8.0%	8.7%	6.0%	9.0%	5.3%	9.2%	7.3%	9.0%	8.3%	57.4%	65.2%
Reputation/EDIFACT	3.8%	2.5%	5.1%	2.0%	7.4%	2.5%	5.8%	2.1%	4.9%	3.5%	73.0%	87.4%
Level of commitment	11.0%	13.3%	9.4%	6.7%	9.9%	6.6%	12.0%	11.4%	11.2%	11.3%	46.5%	50.7%
As compensation	4.6%	4.6%	6.1%	4.5%	5.2%	3.9%	8.8%	2.8%	6.5%	5.0%	68.8%	79.2%

Note: 1072 and 1065 observations in 1996 and 1998 respectively.

Table I - Ranking of criteria for choice of domestic cash management banks in 1996 and 1998

	Relationship-oriented $r = .9957; p < .0001$		Commitment-oriented $r = .8705; p = .0049$		Transaction-oriented $r = .9375; p = .0006$		Bank rating-oriented $r = .9796; p < .0001$		Total	
	1996	1998	1996	1998	1996	1998	1996	1998	1996	1998
Segment size	252	227	230	156	134	201	91	104	707	688
Percentage of total	35.6%	33.0%	32.5%	22.7%	19.0%	29.2%	12.9%	15.1%	100.0%	100.0%
Choice criteria										
Good relationship	2.24	2.26	2.97	3.65	5.28	4.52	3.89	3.56	3.27	3.43
Pricing	2.17	2.46	3.02	3.49	2.22	2.32	3.01	2.78	2.56	2.70
Service quality	2.31	2.27	3.04	3.07	2.13	2.15	2.32	2.57	2.51	2.46
Bank's credit ratings	5.47	5.51	5.56	5.37	5.80	5.67	2.02	2.14	5.12	5.02
Technology	4.59	4.57	5.43	4.56	3.75	2.87	5.21	4.65	4.78	4.08
Branch network	5.38	5.36	5.18	5.29	4.18	4.70	5.51	5.71	5.10	5.20
Level of commitment	5.50	5.19	3.46	2.62	4.79	5.36	5.44	5.75	4.69	4.74
As compensation	5.74	5.51	4.75	5.10	5.74	5.74	5.82	5.89	5.43	5.54

Note: The numbers regarding the benefits are the average ranking of the criteria for choice of domestic cash management within the segments. Non-ranked was coded 6, and therefore the scale goes from 1= most important criteria down to 6= least important.

Table II - profile of micro-segments

Benefit/choice criteria	Relationship-oriented		Commitment-oriented		Transaction-oriented		Bank rating-oriented		Total	
	F-value	*p*-value	*F*-value	*p*-value	*F*-value	*p*-value	*F*-value	*p*-value	*F*-value	*p*-value
Overall MANOVA test	5.3979	0.0001	10.6545	0.0001	10.8451	0.0001	3.2025	0.0020	14.1676	0.0001
(Wilks' lambda)	(0.9159)		(0.8156)		(0.7898)		(0.8789)		(0.9244)	
Univariate ANOVA tests										
Good relationship	0.02	0.8985	14.02	0.0002	38.82	0.0001	2.37	0.1252	3.22	0.0732
Pricing	6.78	0.0095	7.20	0.0076	0.48	0.4897	1.18	0.2793	2.98	0.0847
Service quality	0.08	0.7780	0.04	0.8425	0.03	0.8674	1.57	0.2120	0.45	0.5022
Bank's credit ratings	0.28	0.5954	2.67	0.1033	3.42	0.0652	0.76	0.3852	1.59	0.2069
Technology	0.03	0.8718	45.55	0.0001	28.99	0.0001	12.51	0.0005	78.90	0.0001
Branch network	0.06	0.8136	0.66	0.4174	7.05	0.0083	2.37	0.1257	1.77	0.1832
Level of commitment	12.93	0.0004	25.18	0.0001	19.71	0.0001	7.66	0.0062	0.37	0.5447
As compensation	8.29	0.0042	3.80	0.0519	0.00	0.9763	0.84	0.3618	2.99	0.0842

Table III - MANOVA results: average benefit importance

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