



## Applying an automatic approach for showing up the hidden themes in financial marketing research (1961–2010)

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### ABSTRACT

This paper analyses the academic research conducted in financial marketing from 1961 to 2010. To do so, an automatic approach for detecting and visualising the hidden themes is applied. This automatic approach, based on co-word analysis, combines performance analysis and science mapping. It permits visualising the division of the financial marketing research (FMR) into several subfields, and indicate the relationships between them. These outcomes are completed with a systematic review, where a content analysis is used to explore the type of methodologies and topics most frequently used.

The results allow us to identifying trends that will presumably be developed in FMR in coming years. In addition, these results also help both experts and novices to understand the current state of the art of FMR and to predict where future research could lead.

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### 1. Introduction

In general, the financial sector did not become highly competitive until some 20 years ago when the liberalisation of financial services and merger and acquisition actions led to increased competition, particularly in sectors such as banking, savings and loans, stock market investing, insurance companies, and others (Kamakura, Ramaswami, & Srivastava, 1991). In this new context, sectors with a high degree of competitiveness, is where marketing as a business strategy reaches its maximum meaning and development.

Discussions on the financial sector or system, and especially those from a marketing approach, usually refer solely to the banking sector (banks and savings banks) as this sector virtually controls and dominates the entire financial system. However, it is important to distinguish between bank marketing and financial marketing. The first type of marketing basically involves credit institutions, while the second is undertaken by any entity, company or agency that provides a range of financial products (Muñoz, 2011). In this paper, we have chosen this expanded vision of financial marketing.

A review (Tyler & Stanley, 1999) of the scientific literature shows that in past decades the scientific community paid scant attention to service markets in general and financial markets in particular, and even less attention to the topic of sector-based marketing. In spite of the difficulties involved in these markets, the literature specialised in financial marketing should not overlook analyses of the exchange relations that occur in them, which in turn serve to complement the debates in broader areas such as services marketing. For this reason, we consider that financial marketing deserves a detailed study of its past action lines as clues of what may be its future.

So, this paper analyses the research conducted in financial marketing research (FMR) by using academic publications. The analysis is organised into two parts. Part 1 of the study applies an automatic approach combining performance analysis and science mapping (Cobo, López-Herrera, Herrera-Viedma, & Herrera 2011a; Noyons, Moed, & Luwel 1999; Van Raan, 2005) for detecting and visualising conceptual subdomains and identifying the most prominent themes treated by FMR in the last 50 years. The analysis includes both content and citation analysis on the basis of the main academic publications on this topic from 1961 to 2010. Quantitative and qualitative measures are used to identify the most prominent themes. Quantitative data are used to put together closely related concepts (themes or clusters of topics), while qualitative indicators (i.e., those based on citations) are used to measure the quality and/or impact of the themes identified. The study also incorporates a thematic network to show, in a visual way, the associations between the main

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concepts treated by FMR. These outcomes are completed and enriched in Part 2 with a revision of 45 additional scientific papers that make reference to the methodological sophistication, type of methodologies used and the themes and content covered, clearly distinguishing between three periods: the eighties, the nineties and the new millennium. This review serves to enrich the results of the previous bibliometric analysis by identifying the evolution that has characterised this research effort and the research trends that will presumably be developed in this field.

The paper is structured as follows. Section 2 describes the main results and methodology and data used in part 1, while Section 3 shows the results of part 2. Section 4, discussion, summarises the most highlighting results, and finally, some conclusions are drawn.

## 2. Part 1: Bibliometric study through co-word analysis

This part is organised as follows. Section 2.1 introduces the analysis methodology, Section 2.2 describes the data set used in the study, in Section 2.3 describes the main results, including the most frequent journals, the main themes (and their areas), and the relationships between these themes and other directly linked concepts (thematic network).

### 2.1. Methodology

In this paper, we use a reduced version of the bibliometric approach proposed by Cobo et al. (2011a). This approach combines both performance analysis tools and science mapping tools to analyse a research field (Cobo, López-Herrera, Herrera, & Herrera-Viedma 2011c; López-Herrera et al., 2012), and detect and visualise its conceptual subdomains (particular topics/themes or general thematic areas) and thematic evolution.

In our analysis, bibliometric maps are created using co-word analysis; a content analysis technique that is effective in mapping the strength of association between information items in textual data (Callon, Courtial, & Laville, 1991; Callon, Courtial, Turner, & Bauin, 1983; Coulter, Monarch, & Konda, 1998; Whittaker, 1989). Co-word analysis is a powerful technique for discovering, describing and visualising the interactions between words/terms/topics in different fields in scientific research (Bailón-Moreno, Jurado-Alameda, & Ruiz-Banos, 2006; Callon et al., 1991; Chen, Lin, & Yang, 2011; Leydesdorff & Zhou, 2008; López-Herrera, Cobo, Herrera-Viedma, & Herrera, 2010; López-Herrera et al., 2009; Meng, Lin, & Li, 2011; Muñoz-Leiva, Viedma-del Jesús, Sánchez-Fernández, & López-Herrera, 2011; Park & Lee, 2011; Viedma-del-Jesus, Perakakis, Muñoz, López-Herrera, & Vila, 2011; Wang & Ohsawa, 2012). This technique reduces a space of descriptors (or keywords) to a set of network graphs that effectively illustrate the strongest associations between descriptors (Coulter et al., 1998).

Additionally, it develops a performance analysis of specific themes using a series of basic bibliometric indicators. Three of the four phases proposed in Cobo et al. (2011a) are used in this paper:

**Phase 1 (Detect the research themes).** To do so, we first compute the co-occurrence matrix by assuming that the co-occurrence frequency of two keywords is extracted from the corpus of documents by counting the number of documents in which the two keywords appear together. Secondly, we compute the equivalence index among keywords (Callon et al., 1991), called  $e_{ij}$ :  $e_{ij} = \frac{c_{ij}}{c_i \cdot c_j}$ , where  $c_{ij}$  is the number of documents in which two keywords  $i$  and  $j$  co-occur and  $c_i$  and  $c_j$  represent the number of documents in which each one appears. At the end of this phase, we cluster keywords to topics/themes by using the simple centres algorithm (Coulter et al., 1998). As this algorithm automatically

returns labelled clusters, a post-process to label the clusters is not needed. Such a process of clustering enables us to locate keyword networks that are strongly linked to each other and which correspond to interest centres or to research problems that are the object of significant investment by researchers.

**Phase 2 (Build strategic diagrams).** In the clustering process we obtain a set of interconnected networks or themes. In this context, each keyword network or theme can then be characterised by two parameters (Callon et al., 1991):

- **Centrality:** This measures the degree of interaction of a network with other networks and can be defined as:  $c = 10 \cdot \sum e_{kh}$ , where  $k$  is a keyword belonging to the theme and  $h$  is a keyword belonging to other themes. Centrality measures the strength of external ties to other themes. This value can be understood as a measure of the importance of a theme in the development of the entire research field analysed.
- **Density:** This measures the internal strength of the network and can be defined as:  $d = 100 \cdot \frac{\sum e_{ij}}{w}$ , where  $i$  and  $j$  are keywords belonging to the theme and  $w$  is the number of keywords in the theme. Density measures the strength of internal ties among all the keywords describing the research theme. This value can be understood as a measure of the theme's development.

In this context, *Isolated Networks* refer to networks that have low centrality values, while *Principal Networks* are those that have high centrality and high density values (for more detail see Callon et al., 1991).

A *strategic diagram* is a two-dimensional space built by plotting themes according to their centrality rank ( $c_r$ ) and density rank ( $d_r$ ) calculated as:  $c_r = \frac{\text{rank}_i^c}{N}$ ,  $d_r = \frac{\text{rank}_i^d}{N}$ , where  $\text{rank}_i^c$  is the position of theme  $i$  in the themes list in ascending sort of centrality, and  $\text{rank}_i^d$  is the position of theme  $i$  in the themes list in ascending sort of density.  $N$  is the number of themes in the whole network, and is introduced to standardise the  $c_r$  and  $d_r$  values to the range [0,1].

An example of a strategic diagram is presented in Fig. 1. Thus, with both parameters a research field can be understood to be a set of research themes that are mapped in a two-dimensional space and classified into four groups (Callon et al., 1991):

- Themes in the upper-right quadrant are both well developed and important for the structuring of a research field. They are known as the motor themes of the speciality given that they present strong centrality and high density.
- Themes in the upper-left quadrant have well-developed internal ties but unimportant external ties and so are of only marginal importance for the field. These themes are very specialised and peripheral in character.

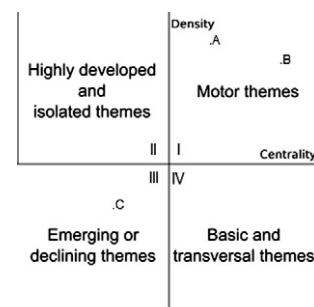


Fig. 1. Quadrants in a strategic diagram and an example.

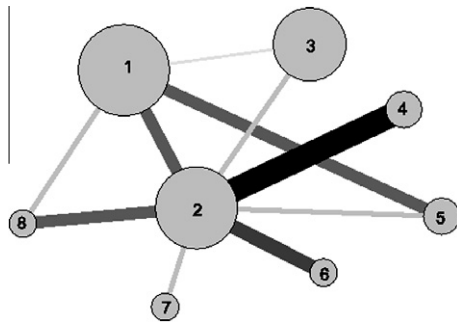


Fig. 2. An example of a thematic network.

- III Themes in the lower-left quadrant are both weakly developed and marginal. The themes of this quadrant have low density and low centrality and mainly represent either emerging or disappearing themes.
- IV Themes in the lower-right quadrant are important for a research field, but are not developed. Hence this quadrant groups transversal and general, basic themes.

In a theme, the keywords and their interconnections draw a network graph called a thematic network. Each thematic network is labelled using the name of the most significant keyword in the associated theme (usually identified by the most central keyword of the theme). An example of a thematic network is drawn in Fig. 2. Here, several keywords are interconnected where the volume of the spheres is proportional to the number of documents corresponding to each keyword, and the thickness of the link between two spheres  $i$  and  $j$  is proportional to the equivalence index  $e_{ij}$ . In addition to the whole network of interconnected themes and keywords, a second network is built based on the documents linked to each thematic network. A document is linked to a theme if it contains at least two keywords that are present in the thematic network.

Furthermore, the strategic diagrams can be enriched by adding a third dimension in order to show more information. In doing so, the themes can be represented as a sphere whose volume is proportional to different quantitative (or qualitative) data, as for example, the number of documents associated with the theme or the number of citations received of the documents associated with the theme.

**Phase 3 (Carry out a performance analysis).** This permits us to quantitatively and qualitatively measure the relative contribution of themes to the whole research field, as well as to detect the most prominent, productive and highest-impact subfields. To do so, we use bibliometric indicators which are applied to the different themes identified, specifically, the number of published documents and the number of citations received.

We should point out that the co-word analysis is performed using *SciMAT* software (Cobo, López-Herrera, Herrera, & Herrera-Viedma, 2012). *SciMAT* is based on the simple centre algorithm to detect the themes through different sub-periods of years. Specific software (*Pajek* and *ad hoc* scripts) was used to plot the themes in the strategic diagram and draw the thematic networks.

## 2.2. Data sets

The data set used in this paper consisted of a corpus containing 84 papers about financial marketing and its various subfields: financial marketing (42 papers), bank marketing (25), insurance marketing (18) and stock exchange or stock-market marketing (2). These 84 papers contain a total of 244 different keywords. Fol-

lowing these queries, some terms had to be recoded or united under a uniform standard of classification. Query #1 was extracted from the ISI Web of Science<sup>4</sup> (ISIWoS) using 31th December 2010 as the last date of publication.

query #1: TS = ("financial marketing") OR TS = ("bank marketing") OR TS = ("banking marketing") OR TS = ("insurance marketing") OR TS = ("stock exchange marketing") OR TS = ("stock-market marketing"),

Where the field TS is a topic-based query ('topic' = 'title' + 'keyword' + 'abstract').

Fig. 3 shows the number of FMR papers recorded in the ISIWoS from 1961 to 2010.

Given that the data were downloaded from the ISIWoS, the author-provided keywords and the *Keywords Plus* of the documents are used jointly. Prior to this, the keywords undergo a normalisation process to join the plural and singular forms of the keywords. Acronyms are also joined to their respective keywords.

In this study, we also use the citations of the documents. For each paper, we have considered citations received until 15th June, 2011. The citations that we take into account proceed also from the ISIWoS.

## 2.3. Results of the application: evolution of FMR

This section is structured as follows:

- Section (a) shows the main keywords associated with the most frequent queries and journals.
- Section (b) shows the strategic diagrams and describes their principal themes.
- Section (c) shows the most important themes and the thematic networks associated to them.

### 2.3.1. Main keywords associated to the most frequent queries and journals

The terms most frequently (more than two repeats) associated with the search (query #1) were: *models*, *financial marketing*, *information*, *insurance marketing*, *artificial neural networks*, *banking* in general, *consumer perceptions*, *decision*, *innovation* (to which we add *adoption of an innovation*), *marketing*, *quality*, *strategy*, *competitive advantage*, Customer Relationship Management (CRM), *electronic banking*, *management*, *performance* and *satisfaction* (see Table 1).

And the journals most frequently (more than two repeats) associated with the search were: *Actual Problems of Economics* (4 papers), *Journal of Risk and Insurance* (4), *Expert Systems with Applications* (3), *European Journal of Marketing* (3), *Journal of the Market Research Society* (3), *Revue Francaise du Marketing* (3) and *The Service Industries Journal* (3).

Following this step, the concepts or tools were described by linking them to financial marketing. The co-word analysis included the topics used in the query #1 (e.g., financial marketing, bank marketing, etc.) as they refer to relatively heterogeneous marketing applications with strong semantic differences.

### 2.3.2. Strategic diagrams and their principal themes

To examine this academic research in a conceptual manner, Fig. 4 shows two types of strategic diagrams. In the first strategic diagram shown on the left, the volume of the spheres is proportional to the number of published documents associated with each theme. In the second strategic diagram shown on the right, the vol-

<sup>4</sup> <http://scientific.thomson.com/products/wos/>.

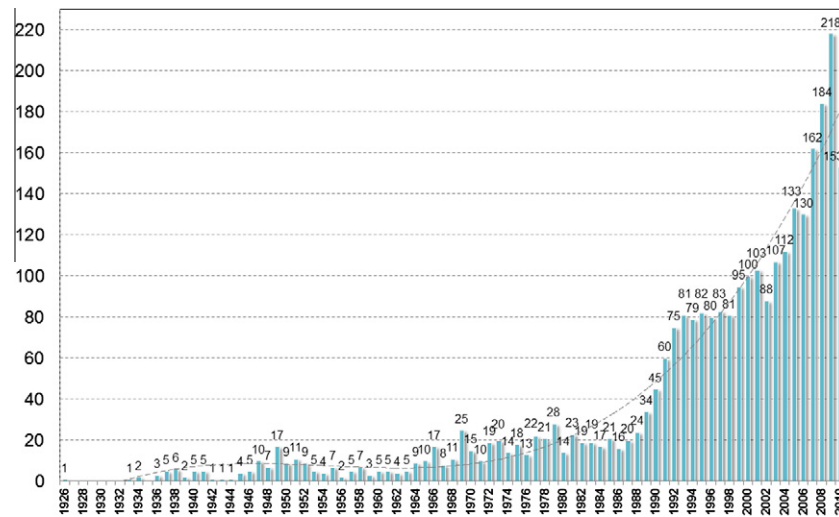


Fig. 3. Number of FRM papers in ISIWoS from 1961–2010 per year.

Table 1

Terms associated to financial marketing queries.

Term	<i>n</i> <sup>a</sup>	%	Average year <sup>b</sup>	Term	<i>n</i> <sup>a</sup>	%	Average year <sup>b</sup>
Financial-marketing	9	7.32	2008	Bank-marketing	2	1.63	2009
Models	7	5.69	2005	Behaviour	2	1.63	2006
Information	6	4.88	2005	Brand-equity	2	1.63	2009
Insurance-marketing	5	4.07	2008	Classification	2	1.63	2003
Artificial-neural-network	4	3.25	2005	Cognitive-style	2	1.63	2006
Banking	4	3.25	2009	Cost	2	1.63	1996
Consumer-perceptions	4	3.25	2009	E-commerce	2	1.63	2005
Decision-making	4	3.25	2008	Economics	2	1.63	2000
Innovation	4	3.25	2007	Expectations	2	1.63	2006
Marketing	4	3.25	2002	Financial-market	2	1.63	2008
Quality	4	3.25	2009	Financial-activity	2	1.63	2009
Strategy	4	3.25	2005	Indicators	2	1.63	2003
Competitive-advantage	3	2.44	2005	Industry	2	1.63	1996
Customer-relationship-management	3	2.44	2008	Internet	2	1.63	2007
E-banking	3	2.44	2006	Investors'-behaviour	2	1.63	2010
Management	3	2.44	2002	Involvement	2	1.63	2006
Performance	3	2.44	2009	Knowledge	2	1.63	1994
Satisfaction	3	2.44	2009	Life-insurance	2	1.63	2008
Adoption- innovation	2	1.63	2006	Product	2	1.63	2008
Algorithms	2	1.63	2008	Return-on-investment	2	1.63	2010
–	–	–	–	Valuation	2	1.63	2000

The calculation does not take into account the number of times that the terms appear in the title, the abstract or Keyword Plus.

<sup>a</sup> Only terms with a frequency equal to or greater than 2 were selected.

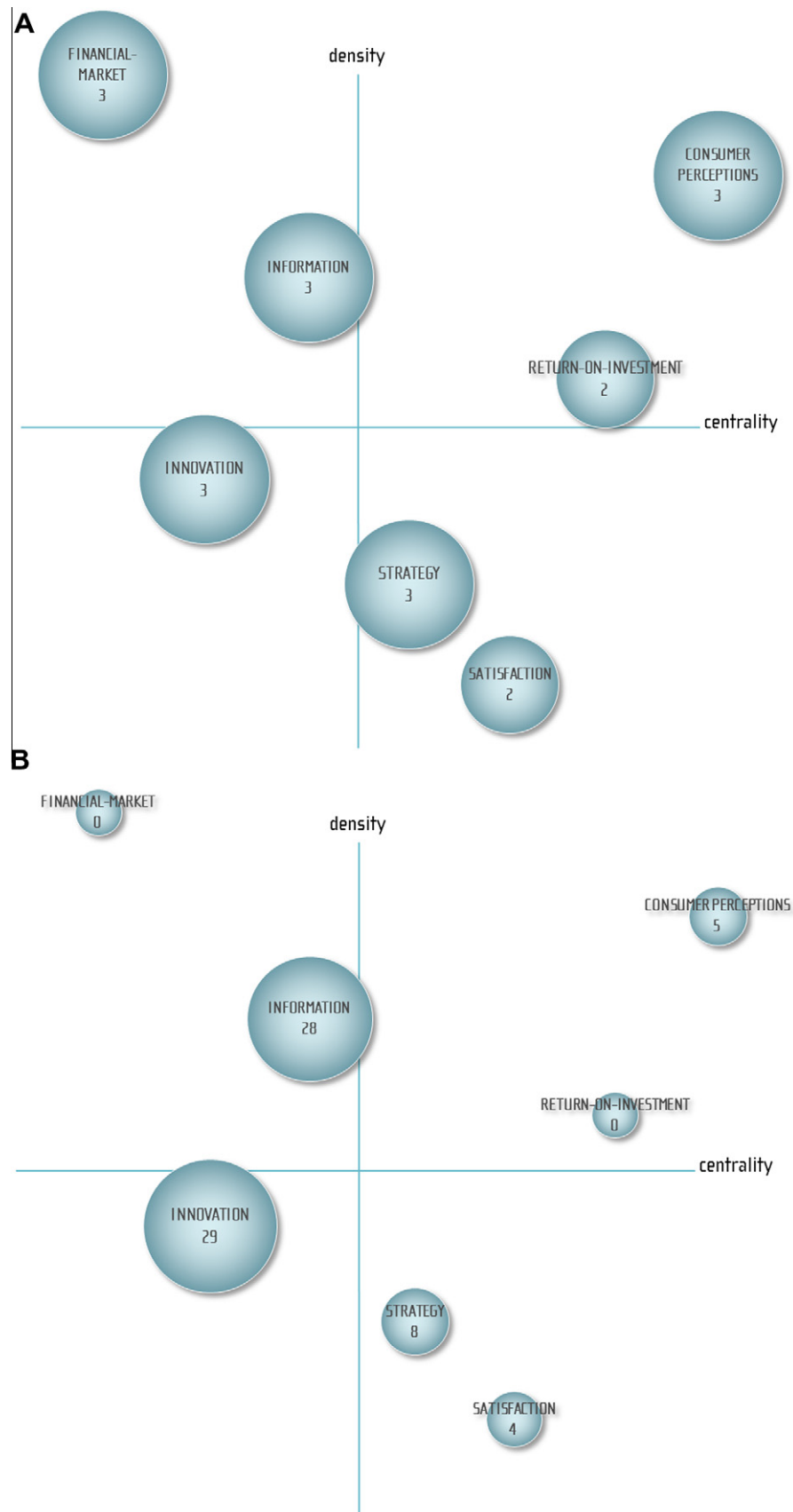
<sup>b</sup> Average year of the papers using this term.

ume of spheres is proportional to the number of citations of the published documents corresponding to each theme.

Due to their strategic position in the diagram (high centrality and density), studies on CONSUMER-PERCEPTION (3 papers) and RETURNS-ROI (2), which are closely related to studies on PERFORMANCE (3), are considered motor themes (upper right quadrant of Fig. 4) in FMR. These are themes that can determine the restructuring of this field of research, but have received a small number of citations (five citations and no citations, respectively). A more detailed analysis of papers on CONSUMER-PERCEPTION shows that the papers were published between 2008 and 2009 and: (1) propose a financial model to estimate the *brand equity* of suppliers, (2) assess the evolution of consumer reactions to service attributes in the context of the financial crisis and, finally, (3) establish a tolerance region and satisfaction levels among young people regarding their expectations of bank services. In the second case (RETURNS-ROI and PERFORMANCE), the papers were published in 2009 and 2010, specifically a paper on a computer model for

accounting and financial management of small and medium-sized enterprises (SMEs), a study of mobile trading or using mobile devices when buying/selling stocks (keywords used: *roi + performance*) and an evaluation of CRM programmes in the insurance sector (*performance*).

From the standpoint of financial marketing, SATISFACTION (2 papers) and STRATEGY (3 papers) are basic or general themes. However, unlike the previous themes, they are yet to be fully developed (low density). As regards the theme of SATISFACTION, the papers focus on the benefits of long-term relationships with customers and their satisfaction (through relationship marketing). The proper management of these relationships is important in achieving market objectives and an essential element in the performance of any financial institution. Another paper examines the growing importance of service *quality* for success and survival in the banking sector. The provision of high quality services contributes to customer SATISFACTION, customers' subsequent loyalty, market share, recruitment of new customers and returns. It is



**Fig. 4.** Strategic diagram based on number of documents published and number of times the document was cited due.

obvious that in both papers (published in 2009) this concept is related to consumer expectations (see the thematic network in Fig. 5)

and bank performance. The papers that analyse STRATEGY (also relatively recent, dating from 2004 and 2006) provide an overview of



the basic ideas behind strategic planning as a modern concept in financial marketing, or focus on cognitive models of involvement in the *Internet* context.

Research on FINANCIAL-MARKETS (3 papers) and INFORMATION (3) in general focus on relatively specific themes in the discipline which are peripheral in character. These themes have well-developed internal links but irrelevant external relationships, especially in the case of the FINANCIAL-MARKET given its specific marketing types (see thematic network in Fig. 4). FINANCIAL-MARKETS refers to different theoretical and methodological approaches to determine the essence of financial marketing. These works, which are very recent (2010), define the functions and specific features of financial marketing strategies implemented in certain segments in the context of globalisation or describe mobile trading system experiences. The theme INFORMATION grouped several papers published from 1995 to 2010 on the perception of different insurance policies and coverage or insurance agents (late 1990s). More recent papers (2008 onwards) analyse communications spending, and once again assess consumer reactions to certain kinds of attributes in the context of the financial crisis as well as the strategy of offering more attractive services such as the provision of mobile trading systems to increase psychological switching costs.

Research on INNOVATIONS in the sector (3 papers) shows a relatively low density and low centrality. Due to the absence of other periods for purposes of comparison, it is not possible to conclude whether this is an emerging or disappearing theme. An analysis of the number of citations suggests that the study of INNOVATIONS in the financial sector is highly recent (2003–2010), and is therefore an emerging theme. The papers focused on specific products (such as *life insurance*), relationship marketing, and from the perspective of decision making, how the availability of resources (financial, marketing and technological) affects decision makers' assessments of new and competitive products and their reactions to them. Like INFORMATION (nearly 30 citations), these themes had a greater impact or quality in the scientific community.

Data for each theme is shown in Table 2; specifically, the number of associated papers, the number of times these themes were cited and the mean number of citations received. More concretely, we find that the research themes INNOVATION and INFORMATION had the highest impact (9.67 and 9.33 citations per article, respectively).

### 2.3.3. The most important themes showing the associated thematic network

In what follows, we present the most frequent terms (with a frequency greater than 2) as represented by Pajek. As can be seen, there are different thematic networks with strong intra-network links (shown in different colours/shadows) and other additional inter-network links (black lines).

First, the themes FINANCIAL-MARKET or *financial marketing* appear to be closely related to different types of marketing applied to the sub-sectors of *insurance marketing* (e.g., studied in the Chinese market), *banking* and the *stock exchange market*. Bank marketing is not only strongly linked to financial and stock markets, but also externally to customer relationship management (CRM) systems. Only two papers deal with the *stock exchange market*; one of which attempts to predict the behaviour of these markets using *artificial neural networks*, and another which analyses a specific derivative product (*purchase warranty*) offered in a stock options market of the Netherlands and develops a model to compare the value of different derivative products. In addition to these two papers, others address this theme in a more superficial manner by providing a general overview of theoretical and methodological approaches to determine the essence of financial marketing, its functions, and the specific characteristics of financial marketing strategies with respect to certain segments, or discuss the risks and challenges of the impact of the stock-market on foreign insurance companies.

SATISFACTION is chiefly related to *expectations* and CRM systems. The theme CONSUMER-PERCEPTIONS is primarily related to the topics of *quality* and *banking* and, to a lesser extent, to *models* and *behaviour*. The theme RETURNS-ROI is analysed along with other aspects such as *performance*, *management*, *electronic banking* and *indicators*, among others.

The theme STRATEGY is related to *financial activity*, *Internet* (as shown in the strategic diagrams), *products* and *algorithms*. As we have seen, *financial activity* is chiefly and increasingly associated with *artificial neural networks*, primarily in regard to stock-market forecasts in 1998 (theoretical approach: principles and types of applications), 2007 and 2008.

As shown in the analysis of the strategic diagrams, the theme INNOVATION is linked to *competitive advantage*, *life insurance*, *decision making* and *knowledge*. At the same time, *knowledge* can be extracted by analysing *indicators* as reflected in the close links between these two terms.

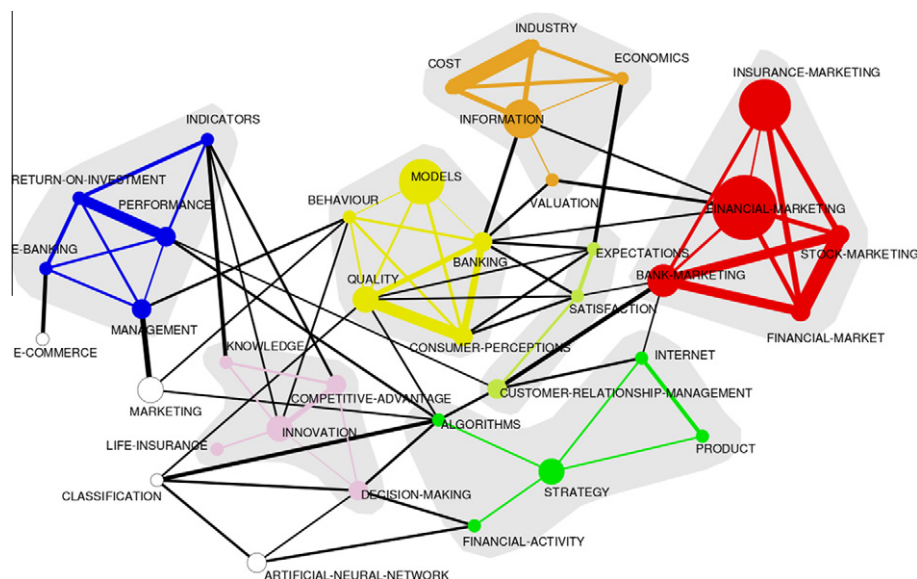


Fig. 5. Thematic network with most frequent themes.

**Table 2**  
Quantitative data for themes.

Theme	Documents	Citations	Mean number of citations
Financial-market	3	0	0.00
Consumer-perceptions	3	5	1.67
Return-on-investment	2	0	0.00
Strategy	3	8	2.67
Innovation	3	29	9.67
Information	3	28	9.33
Satisfaction	2	4	2.00

As regards INFORMATION, this theme is primarily related to *cost*, *economy* and *industry*, and also to the network which includes the term *banking* in general (CONSUMER-PERCEPTIONS), while *economics* is related to *expectations*.

Furthermore, *marketing* and *artificial neural networks* (in white) are observed to be both a discipline and a tool of analysis. Although they have been widely studied in academic research from both a theoretical and practical perspective, *marketing* and *artificial neural networks* are not clearly linked to other themes due to their wide range of applications. It is important to note the links between *algorithms* and *classification techniques* and support for *decision making* through implementing these *algorithms* in *artificial neural networks*. Finally, *marketing* and *electronic banking* are linked through *management*.

Hence, the most frequent themes or techniques in the field of financial marketing are the development of *models* to explain the *behaviour* of different magnitudes based on others, studies focusing on INFORMATION, *insurance marketing*, *artificial neural networks*, INNOVATION and the adoption of innovation, and in relation to this, the study of *competitive advantage* achieved in the *management* of the entity, CRM systems, *electronic banking* and customer *satisfaction* with financial products. As regards themes of future interest, it is expected that growing research efforts will focus on the study of *mobile trading* and the application of neural networks to predict stock-market behaviour, the *brand equity* of financial products, *satisfaction* and other consumer reactions, CRM programmes in the banking or insurance sector, new specific financial products and the analysis of communication costs.

### 3. Part 2: Evolution of financial marketing research: Review of previous studies

After analysing the overall past and present situation of FMR, in what follows we analyse the evolution of this field of research through a review of papers that have been published over three clearly identified periods, the most recent of which is indicative of the research trends that are expected to be developed in this area over the next years.

#### 3.1. The eighties

In the eighties, it was common to find theoretical studies on marketing and consumer banking (e.g., Day, 1985; Moriarty, Kimball, & Gay, 1983) which also included basic studies on segmentation (Cheron, McTavish, & Perrien, 1989; Yorke, 1982).

At that time, endogenous variables (internal or intrinsic to the organisation) were identified as factors that exist within or between the parties involved (supply and demand). These factors can be divided into three types (Tyler & Stanley, 1999):

- *Emotional or environmental factors*: These include constructs such as trust, commitment or communication that focus on the interactions of both perspectives and primarily occur between individuals.

- *Economic factors*: These are based on or around contracted services and the creation of demand for such services. These factors especially affected the previous factors when considering a stage of identification by the other party (bank or client) and preceded emotional elements.
- *Structural factors*: These factors are related to the organisation of service delivery and the actual supplier.

Exogenous variables are related to (Tyler & Stanley, 1999): (1) competition, (2) geographic location, and (3) other macro-economic conditions. There is an apparent difficulty in including such variables in the theoretical framework as they escape the control of parties or agents involved in the purchase and sale of financial services.

Time is a variable that complements and affects the three above variables. Normally this variable was used in theoretical studies or studies based on in-depth interview techniques (Tyler & Stanley, 1999). Establishing relationships is the result of interactions over time, and thus should be related to this variable, if only implicitly. Time is seen as an agent or a cyclic or continuous variable, which in both cases affects the results. The studies that explored time as a continuous variable focused on factors such as the creation of economies of scope, building trust or reducing price sensitivity (e.g., Moriarty et al., 1983). Given that time is an exogenous variable, it can give rise to economic problems or periods of economic strength.

For the decade of the eighties, we identified a set of concepts and methodologies for which some degree of consensus was reached. For example, the following themes were studied extensively:

- *Segmentation methods*: In particular, these methods focused on structural rather than economic factors (e.g., Cheron et al., 1989; Yorke, 1982). This was also observed in the study by Turnbull and Gibbs (1989) on the selection criteria of a bank entity.
- The importance of *financial service quality* (Teas, Dorsch, & Mc Alexander, 1988).
- The *value and nature of relationships* was first studied in this decade (e.g., Moriarty et al., 1983). For example, it was found that the building of relationships involves considerations other than price (e.g., Turnbull & Gibbs, 1987).

#### 3.2. The nineties

##### 3.2.1. Research themes and concepts

From 1989/1990 onwards, studies on demand, particularly with reference to the perception of SMEs, focused primarily on emotional variables or factors. However, studies on corporations followed a more economic or structural approach, as did supply side studies. More specifically, studies from the perspective of demand centred on dissatisfaction and the desires of customers of small entities. This can be explained by the apparent epistemological link these studies had to traditional marketing approaches.

In this decade, several studies recognised the importance of macroeconomic (exogenous) factors in the purchase-related actions of companies and how to purchase financial services. In general, external variables were used to a greater extent to justify the importance of increased marketing activities (Tyler & Stanley, 1999). There was general consensus that structural factors also helped to establish effective relationships (e.g., Keltner, 1995; Perrien, Filiatrault, & Richard, 1993). Some of the concepts examined in the scientific literature during this period included:

- The cross-selling of financial services (e.g., Kamakura et al., 1991).

- The adoption of direct banking services (e.g., Lockett & Littler, 1997).
- The importance of client firm size in banking patterns, satisfaction and dependence. During this decade, a vast number of articles that analyse small entities and small organisational clients were published. The existence of a proportional relationship between client firm size and the number of financial institutions with which the firm works (e.g., Chan & Ma, 1990) was widely accepted. Small companies were shown to be less satisfied with their banking relationships and did not value them sufficiently due to their relative vulnerability (Turnbull & Gibbs, 1989).
- Banking relationships based on concepts such as trust and commitment (e.g., Perrien & Richard, 1995; Perrien et al., 1993). These are concepts that have yet to be defined in a complete manner. Their function is somewhat ambiguous and has been widely debated (Tyler & Stanley, 1999). Several relationship marketing models were developed in various ways and under different perspectives (e.g., Perrien et al., 1993; focusing on relationship managers). Some studies also began to question the value and nature of such relationships.
- In the late nineties, studies began to focus on the current status and plans for electronic banking from the perspective of supply (e.g., Knight, Hall, Whitmire, & Hall, 1999; in terms of general managers), the adoption of e-banking by end users (Liao, Shao, Wang, & Chen, 1999) and preliminary classifications of e-banking adopters (Schwaiger & Locarek-Junge, 1998).

From 1994 onwards, publications in the FMR field became increasingly complex and diversified. Relations became a general concern, and their function was seen as being essentially ambiguous. Moreover, the epistemological approaches used in specific debates and/or markets were replaced by conclusions obtained in a practical manner.

### 3.2.2. Empirical studies and methodological sophistication

Throughout the nineties, the discourse changed significantly. While theoretical studies continued to exist (especially since 1991), the main trend was to publish papers with a more rigorous empirical line (especially from the viewpoint of the supplier) and expanded content.

Generally speaking, three possible or basic methodological approaches or “perspectives” can be found in the literature: the “buyer’s” perspective, the “seller’s” perspective or both perspectives simultaneously.

Studies focusing on the end user tended to use interviews as their primary data source (Tyler & Stanley, 1999), while papers centred on the perspective of the “seller” dealt more with organisational and structural aspects and took a more traditional marketing approach (e.g., de Brentani & Coopeer, 1992). These works used either questionnaire-based interviews or published data as their primary data source and in general tended to be more extensive.

Data collection was usually easier in studies focusing on demand than on supply or on both perspectives, and in these cases, the focus was on SMEs. As expected, studies that centred on the buyer were able to obtain larger samples as directors and managers are often hesitant and have reservations when it comes to providing confidential information that could potentially lead to a competitive advantage. As a result, researchers had to resort to interviews in order to maximise the volume of data from one source or point of access. In general, access was particularly difficult in studies on large corporations, investment banking and foreign financial products. These obstacles explain the limited research in these areas.

Studies from the perspective of the client were primarily diagnostic. Studies exploring the supply side were mostly prescriptive (as well as descriptive) and attempted to identify methods to im-

prove services marketing or the organisation of banking structures with a view to efficiently increasing their market share or some other issue related to their position in the sector (Tyler & Stanley, 1999). Therefore some studies presented both perspectives as being complementary.

### 3.2.3. Research approaches in the new millennium

Research efforts in the new century have continued to focus on concepts such as the idealisation, execution, understanding and perception of all aspects of the entity-client relationship, the exact influence of exogenous variables (including the time variable), and, to a larger extent, the adoption of electronic or online services. Specifically, the following concepts and methodologies are found in the literature:

- The beginning of the century was characterised by studies on the changes, state and development of electronic or online banking in different countries e.g., Jayawardhena & Foley, 2000 (UK); Suganthi, Balachandher, & Balachandran, 2001 (Malaysia); Gurău, 2002 (Romania)).
- Segmentation of electronic banking users (Lee, Kwon, & Schumann, 2005; Muñoz, 2009). These papers studied usage levels among different segments.
- The adoption of general financial services (e.g., Black, Lockett, Winklhofer, & Ennew, 2001; Lassala, Ruiz, & Sanz, 2007) or, in particular, electronic banking and determinants of adoption (e.g., Chan & Lu, 2004; Kuisma, Laukkanen, & Hiltunenb, 2007; Lai & Li, 2005; Pikkarainen, Pikkarainen, Karjaluo, & Pahlila, 2004; Shih & Fang, 2004; Tan & Teo, 2000; Wang, Wang, Lin, & Tang, 2003). More specifically, several studies focused on:
  - Attitude formation (e.g., Karjaluo, Mattila, & Pento, 2002; Laforet & Li, 2005; Liao & Cheung, 2002).
  - Perceived risk (e.g., Cunningham, Gerlach, & Harper, 2005).
  - The importance of trust in the acceptance of electronic banking (e.g., Alsajjan & Dennis, 2006) and the use of trust-generating mechanisms in services of this type (e.g., Muñoz, 2008; Yousafzai, Pallister, & Foxall, 2005).
  - Reasons for resistance to electronic banking adoption (e.g., Kuisma et al., 2007).
  - Electronic banking security (Moloney, 2007).
  - The adoption and future of financial (Kleijnen, Wetzels, & De Ruyter, 2004) or banking services (Lee, McGoldrick, Keeling, & Doherty, 2003 (barriers to adoption); Forrester Research Inc., 2006a; Forrester Research Inc., 2006b; Forrester Research Inc., 2006c; Luarn & Lin, 2005) via mobile devices (Gu, Lee, & Suh, 2009).

With a view to the future, these relationships must be explored in greater depth from an interdisciplinary approach. An examination from all epistemological approaches and various perspectives would be enriching. This approach would help to explain how the relationships are conceptualised differently by different groups. Following the ideas proposed by Tyler and Stanley (1999), we believe that future research should focus on investigating:

- The relations between the two parties or perspectives on the exchange (supply and demand). Researchers should apply a set of relevant criteria in creating relationship marketing strategies. Qualitative studies using unstructured interviews provide a flexible data source that supports any type of variable and leads to more specific issues characterised by these relationships. On other occasions, case studies allow researchers to examine the idiosyncrasies of individual relationships and permit conclusions to be reached built on the contradictions that exist between these individual relationships, which otherwise would only take into account common aspects or values in a partial manner.



- The *idealisation, execution, understanding and perception* of all aspects of the relationship.
- *Different specific contexts* that aid in theoretically illustrating financial services markets which have received scant attention (e.g., marketing strategies used in the sale of stocks, bonds, debentures, derivatives of all kinds, reinsurance, and many other more sophisticated financial products). Likewise, research should focus on different points of view; the acceptance of the differences among several perspectives and contexts can contribute to developing theory.
- The *influence of exogenous variables* on different contexts or on reactions to a new exchange or relationship.
- The *influence of the time variable*. This variable provides an opportunity for researchers as it has yet to be fully explored. The endogenous conceptualisation of time is of inherent importance in relationships.

To sum up, we find that, in general, there is evidence of an increase in emotional variables as well as greater methodological sophistication in the studies analysed, thus indicating that the procedure/method is also advancing in this field. We found that in the nineties conclusions were drawn from studies that reviewed a unique and specific context. Future research, however, must examine how these markets affect the application of the doctrine and the patterns or models of other broader contexts.

## 4. Conclusions

### 4.1. Key findings and practical implications

The rapid growth of information and the availability of data from an increasing number of new sources have enhanced the possibilities for data and information exploration, and, consequently, for identifying research trends and patterns in any given area of knowledge (Juvan, Bartol, & Boh, 2005).

In order to explore the evolution of academic research in financial marketing, we have performed a bibliometric study by processing 84 research papers published in journals recorded in ISIWoS. Using a co-words analysis, we have extracted the visual structure of this area of knowledge. This analysis, which has been complemented with the results of previous research, has permitted us to identify a number of future trends.

The results show that CONSUMER-PERCEPTION, PERFORMANCE and the evaluation of RETURNS-ROI on financial products are motor research themes in this field. These are topics that could serve to restructure this field of research, but have received few citations as they have been published quite recently (from 2008 onwards).

SATISFACTION and STRATEGY were found to be basic or general themes, although they were as internally developed as the above themes.

FINANCIAL-MARKET research and INFORMATION in general are relatively specific themes that are peripheral in character. They have well-developed internal links but irrelevant external relations, especially in the case of financial market research given the specific types of marketing this research theme is related to, namely banking, insurance and investment.

From these results, we predict that INNOVATION will become an emerging or disappearing theme depending on the specific object of study. As regards innovation in the banking sector, this theme will likely be of less interest in the future, although recent literature (2007 and 2010) has focused on specific products such as *life insurance*. Both INFORMATION and INNOVATION show a high impact or quality in the scientific community.

In summary, the most frequent topics or techniques in the field of financial marketing are the development of *models* to explain the

*behaviour* of different magnitudes based on others, INFORMATION as a basis for analysis, *insurance marketing*, *artificial neural networks*, INNOVATION and the adoption of innovation, and in relation to this, the study of *competitive advantage* in the *management* of an entity, CRM systems, *electronic banking* and customer *satisfaction* with financial products.

As regards themes of future interest, growing research efforts are expected to focus on the study of *mobile trading* and the application of *neural networks* for predicting stock market behaviour, the *brand value* of financial products, *satisfaction* and other consumer reactions, CRM programs applied to the banking or insurance sector, new specific financial products and the analysis of communication costs.

Our review of different research studies reveals that the methodological sophistication of financial marketing studies has improved in recent decades. Specifically, we identified a number of concepts and methodologies in the eighties for which a certain degree of consensus was reached. For example, different segmentation methods were applied, and the importance of the quality and “price” of financial services as well as the value and nature of relationships were studied.

In the nineties, the discourse changed significantly. Although theoretical studies continued to be conducted, the trend was to publish more rigorous methodological works with broader content, especially from the perspective of the entity. Data collection was easier in studies focusing on demand, while studies carried out on the supply side primarily analysed SMEs. The reason behind this is that access to data is particularly difficult in studies on large corporations, investment banking and foreign financial products.

As regards content, studies on demand focused mainly on emotional variables such as the dissatisfaction and desires of customers of small entities, while studies focusing on the supply side followed a more economic or structural approach. In this decade, researchers recognised the importance of macroeconomic (exogenous) factors in actions by companies related to the purchase of financial services. Some of the concepts discussed in the scientific literature during these years included the cross-selling of financial services, the adoption of direct banking services, the effect of firm-client size on banking patterns, satisfaction and dependence, banking relationships based on trust and commitment, relationship marketing models, current status and future prospects of electronic banking from the perspective of supply, the adoption of electronic banking by end users, and preliminary classifications of adopters of electronic banking services.

In general, we detected signs of an increase in emotional variables and greater methodological sophistication in the studies analysed. We found that in the nineties conclusions were drawn from studies that reviewed a unique and specific context. However, future research needs to examine how these settings affect the application of the doctrine and its models in other broader contexts.

We expect that future papers will continue to focus on the trends identified in this study. For example, in coming years we predict an increase in works that address the topic of the perception or *adoption* of specific media or *channels* of financial distribution such as *electronic banking* and mobile banking. These are the most studied and cited themes by the scientific community interested in financial product marketing. We also anticipate that research will be conducted on other innovations in specific financial products (life insurance and other derivative products) and their impact on cost evaluation.

These findings indicate the potential usefulness of bibliometric studies complemented by a review of publications (45 additional ones in our study) in uncovering the intellectual structure and evolution of different research fields. This evolution provides an opportunity to anticipate interesting developments in these fields with respect to key topics as well as predicting which topics are less

likely to assume a central role in the literature in the near future (Cho & Khang, 2006; Echchakoui & Mathieu, 2008).

The major goal of keyword or co-word analysis has been accomplished in the present paper. Until now researchers have generally overlooked the use of keyword (co-words) analysis even though it leads to unbiased and exhaustive results without fixing the social science subject research areas “a priori”. Keywords genuinely reflect the authors’ beliefs about the subject content fields of their articles, and are important enough to reveal a self-supported, unbiased and exhaustive financial marketing framework, which is especially useful to researchers and social science practitioners.

This paper has required a complex process to refine the keywords to avoid differences in meaning between two keywords which refer to the same topic, but were considered to be different in the analysis. Given that this lack of homogenisation is a major problem of keywords, it would be interesting to propose an international thesaurus about different topics to facilitate searches by researchers and practitioners. In fact, in most bibliographic or full-text databases, users can search either within free text or with controlled terms (keywords or descriptors) since controlled terms allow improved retrieval precision of documents on a selected topic (Juvan et al., 2005; Kevork & Vrechopoulos, 2009), providing that document authors select their keywords over this hypothetical thesaurus.

#### 4.2. Limitations and future researches

The purpose of this research has been to offer an expeditious perspective of the study of FMR during the period 1961–2010 by identifying previous and current themes, predict emerging trends, and determining relationships with other fields. However, this task is not free of difficulties due to the biases involved in an analysis of this kind. The first is that the analysis focuses on priority themes and will inevitably exclude those that are of only marginal importance. Nonetheless, the analysis serves to legitimise discussions about general trends accepted by the majority of the scientific community. The second problem is of a methodological kind in that the diversity of papers included in the analysis makes it difficult to justify their inclusion, although, as mentioned above, the very nature of financial marketing as a discipline makes this global analysis more interesting.

ISIWoS specialises in only a small proportion of leading journals; a limitation that has been overcome with the literature review in Part 2. Nevertheless, future research could be focused on proceedings, more professional journals and other bibliographic databases to enable a wider analysis. In addition, new studies could also include other more advanced citation-based indicators and software such as (Cobo, López-Herrera, Herrera-Viedma, & Herrera, 2011b; Cobo et al., 2012; Franceschini & Maisano, 2010; Kim, Lee, Seol, & Lee, 2011; Lee, Kim, Cho, & Park, 2009; Yoon & Kim, 2012).

Since the analysis is constrained by factors such as sample size and the period examined, among others, its “applicability-generalisability” must be further reviewed and tested in the future, preferably at regular intervals.

Finally, experts and novices could use these data, results and maps to understand the current state of the art with regard to FMR and predict where future research will lead.

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