

Detecting salient themes in financial marketing research from 1961 to 2010

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Abstract

This paper analyses the research conducted in a social science subfield, specifically financial marketing research (FMR). The study is carried out from a longitudinal perspective spanning the period 1961-2010. Concretely, we present an application of a bibliometric and visual analysis using co-word analysis combined with performance analysis and science mapping to detect and visualise conceptual subdomains and identify the most prominent themes. The maps provide insight into the structure of FMR as they permit visualising the division of the field into several subfields, and indicate the relationships between them. The thematic network shows, in a visual way, the associations between the main concepts treated by the FMR community, thus permitting its intellectual structure in the last fifty years to be examined.

This approach allows us to quantify and visualise the thematic evolution of FMR. It also helps both experts and novices to understand the current state of the art of FMR and to predict where future research could lead.

Keywords: Bibliometric study, conceptual evolution, emerging trends, co-word analysis, financial marketing research, bank marketing

INTRODUCTION

Research problem: Financial marketing research

Marketing as a business strategy reaches its maximum development in sectors with a high degree of competitiveness. In general, the financial sector did not become highly competitive until some twenty 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). Although financial institutions lag several decades behind in implementing marketing strategies, they have learned quickly.

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. According to this perspective, bank marketing can be considered a specific type of financial marketing. More specifically, the first type of marketing is undertaken by a bank, which as a financial institution is responsible for administering and lending money, while the second type is done by credit, insurance or investment firms that make up the financial sector (Muñoz, 2011: 19-20).

In line with recent approaches to management, financial products should not be developed according to strict technical criteria, but the result of analysing and satisfying customer needs. Hence, entities must develop a product portfolio that meets

the needs of their target segments (Embid, Martín, & Zorrilla, 1998: 325), as well as a commercialisation strategy as it were another company (Xiao & Nicholson, 2011).

A review 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 (Tyler & Stanley, 1999), 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.

Research structure and aims

This paper analyses the research conducted in a social science subfield, namely financial marketing research (FMR). The study is carried out from a longitudinal perspective and is organised into two parts.

The study presents an application of a bibliometric and visual analysis combining performance analysis and science mapping for detecting and visualising conceptual subdomains and identifying the most prominent themes. Specifically, the aim is to present a bibliometric study (including both content and citation analysis) of FMR on the basis of the main publications on this topic from 1961 to 2010.

In this way, the study combines performance analysis and science mapping (Cobo, López-Herrera, Herrera-Viedma, & Herrera, 2011a; Noyons, Moed, & Luwel, 1999; van Raan, 2005) to detect and visualise conceptual subdomains. 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 concepts treated by FMR, that is, to examine the intellectual structure of this community in the last fifty years.

Keyword analysis is a type of content analysis that uses quantitative descriptions to analyse the content of scientific or other types of articles (Berelson, 1952; Kassirjian, 1977). This method has also been used to ascertain trends (Yale & Gilly, 1988; Roznowski, 2003; Cho & Khang, 2006; Williams & Plouffe, 2007) and to identify topics and preferred statistical approaches (Helgeson, Mager, & Taylor, 1984) in different research fields. In our analysis, the 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, Turner, & Bauin, 1983; Whittaker, 1989; Callon, Courtial, & Laville, 1991; Coulter, Monarch, & Konda, 1998). Co-word analysis is a powerful technique for discovering and describing the interactions between different fields in scientific research (Callon *et al.*, 1991; Bailón-Moreno, Jurado-Alameda, & Ruiz-Banos, 2006; Leydesdorff & Zhou, 2008; López-Herrera, Cobo, Herrera-Viedma, Herrera, Bailón, & Jiménez-Contreras, 2009; López-Herrera, Cobo, Herrera-Viedma, & Herrera, 2010; Viedma, Perakakis, Muñoz, López-Herrera, & Vila, 2011; Muñoz-Leiva *et al.*, 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).

Since domain visualisations typically reference key works in a field, they are a good tool to enable the novice to become instantly familiar with a field through the easy identification of key topics and their relationships (Garfield, 1994:1). In this sense, McCain (1990) suggests that “maps can provide a general historical view of the

intellectual structure of a research area”, while White (1990) asserts that there is “nothing better for reconnoitring macro-level intellectual structure as it evolves in fields of science and scholarship...the maps are essentially a new kind of graphics for revealing intertextual relationships”. We believe that the maps we obtain will provide new insight into the FMR structure as they divide the field into several subfields and show the relationships between these subfields. More concretely, in longitudinal mapping a series of chronologically sequential maps can be used to detect the advances of scientific knowledge and the evolution of the field over the years (Garfield, 1994). While maps of current data alone cannot predict where research will go, longitudinal maps can be useful clues for informed analysts and domain experts with the intention of forecasting emerging trends for a subject domain (Mela, Cimmino, & Ugolini, 1999).

The evolution of FMR is also studied through a quantitative and qualitative analysis of the number of times researchers use and cite specific concepts in their papers over different periods.

The paper is organised as follows. The first section introduces the analysis methodology, section 2 describes the data set used in the study, and section 3 describes the results for the key terms associated with the query and most frequent journals, the main themes (and their areas) addressed in FMR papers published in the top journals of the discipline and the relationships between these themes and other directly linked concepts (thematic network)

Finally, conclusions are drawn and some contributions are discussed.

METHODOLOGY

In this paper, we use 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, and detect and visualise its conceptual subdomains (particular topics/themes or general thematic areas) and thematic evolution.

Co-word analysis is used in a longitudinal framework which allows us to analyse and track the evolution of a research field along consecutive time periods (Garfield, 1994). 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} :
$$e_{ij} = \frac{c_{ij}^2}{c_i \cdot c_j},$$
 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; Cobo *et al.*, 2011a). 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: $c = 100 \frac{\sum e_{k,h}}{w}$ 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: $d = 100 \frac{\sum e_{i,j}}{w}$, 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: $c_r = \frac{rank_i^c}{N}$; $d_r = \frac{rank_i^d}{N}$,

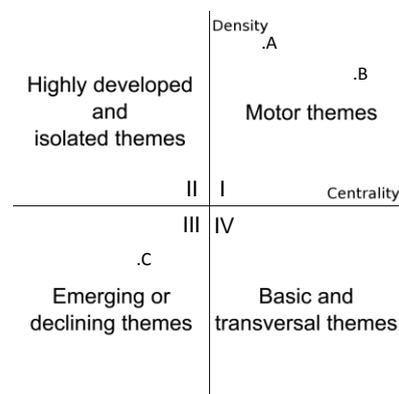
where $rank_i^c$ is the position of theme i in the themes list in ascending sort of centrality, and $rank_i^d$ is the position of theme i in the themes list in ascending sort of density. N is the number of themes in the whole network, and is introduced to standardise the c_r and d_r values to the range [0,1].

An example of a strategic diagram is presented in Figure 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 specialty 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.
- 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.
- 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.

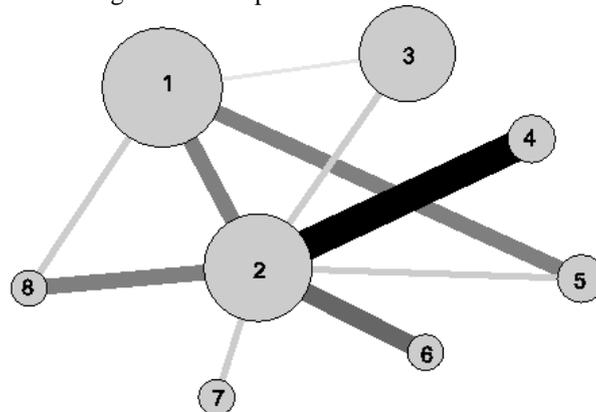
Insert figure 1 about here

Figure 1: Quadrants in a strategic diagram and an example



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 Figure 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.

Figure 2: Example of a 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 and thematic areas 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* software¹ (Cobo *et al.*, 2011b; Sci²s, 2011). *SciMAT* is based on the simple centre algorithm to detect the themes through different sub-periods of years. Specific software (Pajek for Linux) was used to plot the themes in the strategic diagram and draw the thematic networks.

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. Following 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 (*ISIWoS*) using 31 December 2010 as the last date of publication.

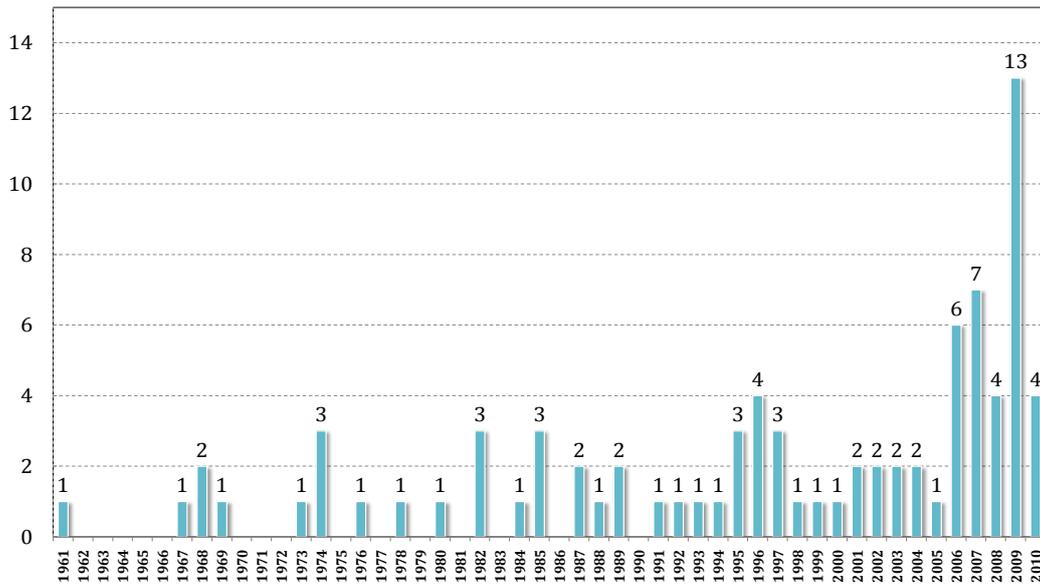
query #1: TS= ("financial marketing") OR TS= ("bank marketing") OR TS= ("banking marketing") OR TS= ("insurance marketing") OR TS= ("stock exchange marketing") OR TS= ("stock-market marketing").

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

Figure 3 shows the number of papers published in the *ISIWoS* from 1961 to 2010.

¹ *SciMAT* is an open source program (GPLv3) developed to analyse or map science from a longitudinal perspective (more information at: <http://sci2s.ugr.es/scimat>).

Figure 3: Number of papers in *ISIWoS* from 1961 to 2010 per year



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 20 May 2011. The citations that we take into account proceed from the *ISIWoS*.

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.

a) Main keywords associated to the most frequent queries and journals

The terms most frequently (more than two repeats) associated with the search 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, CRM, electronic banking, management, performance and satisfaction* (see Table 1).

Table 1. Terms associated to financial marketing queries

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

Source: The authors

Only terms with a frequency equal to or greater than 2 were selected.

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

*: Average year of the papers using this term.

Table 2. Result of search for financial marketing journals

Journal	Frequency
<i>Actual Problems of Economics</i>	4
<i>Journal of Risk and Insurance</i>	4
<i>European Journal of Marketing</i>	3
<i>Expert Systems with Applications</i>	3
<i>Journal of the Market Research Society</i>	3
<i>Revue Francaise du Marketing</i>	3
<i>Service Industries Journal</i>	3
<i>Proceedings of the 2007 International Conference on Management Science and Engineering, Finance Analysis Section</i>	2

Source: The authors

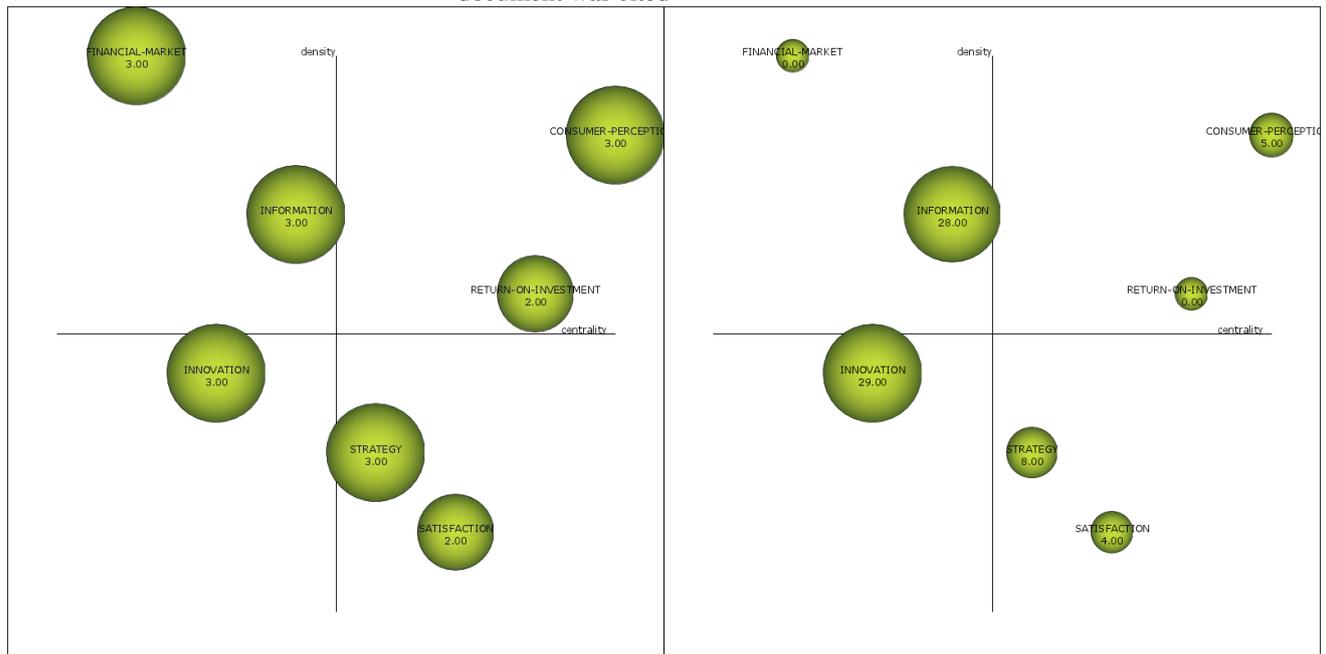
Only journals with a frequency equal to or greater than 2 were selected.

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

b) Strategic diagrams and their principal themes

To examine this academic research in a conceptual manner, Figure 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 volume of spheres is proportional to the number of citations of the published documents corresponding to each theme.

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



Source: The authors

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 (see Figure 4) to studies on PERFORMANCE (3), are considered motor themes (upper right quadrant of Figure 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 (ROI and PERFORMANCE), the papers were published in 2009 and 2010, specifically a paper on a computer model for accounting and financial management of 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 (only 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 obvious that in both papers (published in 2009) this concept is related to consumer *expectations* (see the thematic network in Figure 4) 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 focuses 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 Figure 4). FINANCIAL MARKETS refer 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. A search using the term INFORMATION retrieved 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 to 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 have a greater impact or quality in the scientific community.

Data for each theme is shown in Table 3; 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 have the highest impact (9.67 and 9.33 citations per article, respectively).

Table 3. 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

Source: The authors

c) The most important themes showing the associated thematic network

In what follows, we present the most frequent themes (with a frequency greater than 2) as represented by the Pajek program for Linux (see Figure 5). As can be seen, there are different thematic networks with strong intra-network links (shown in different colours) 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*, *the 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.

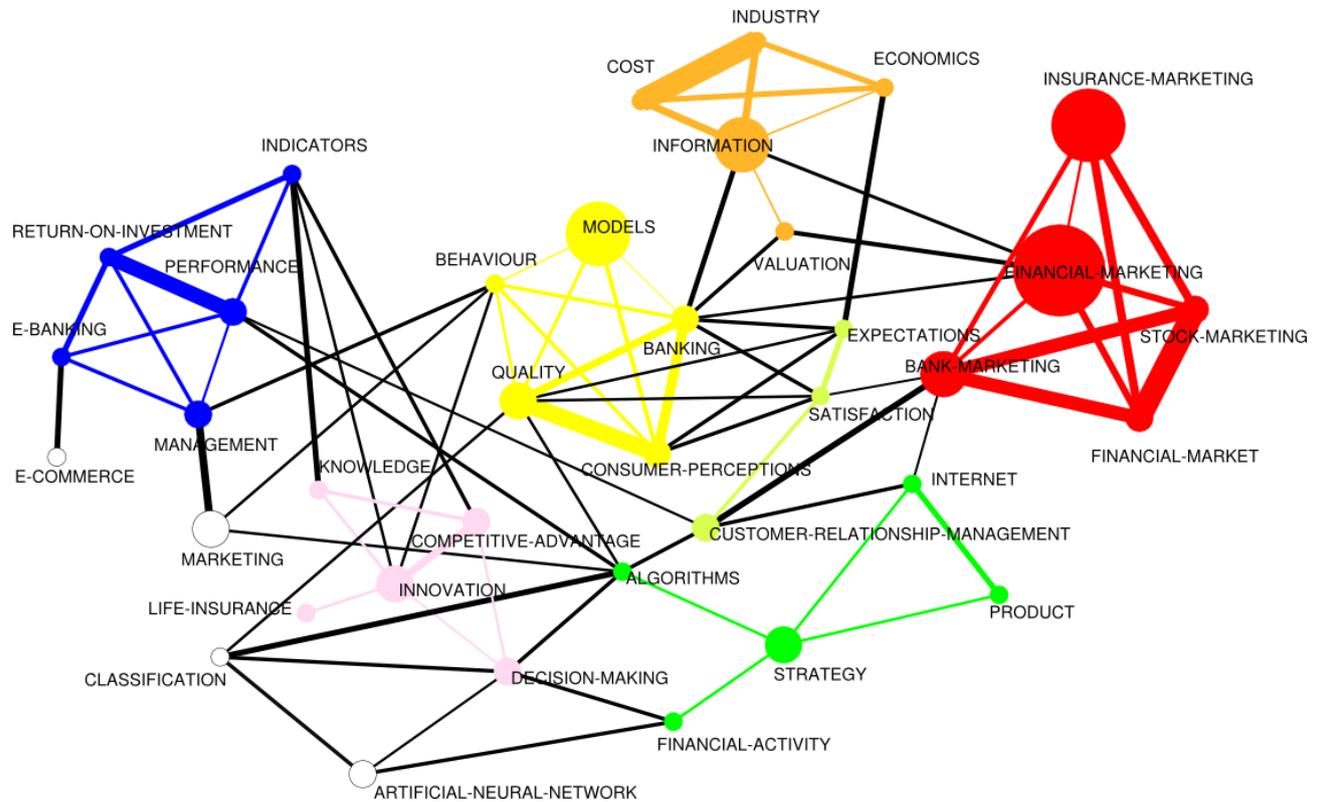
As shown in the analysis of the strategic diagrams, the theme INNOVATION is linked to *competitive advantage*, *life insurance*, *decision making* and *knowledge*. At the same time, *knowledge* can be extracted by analysing *indicators* as reflected in the close links between these two terms.

As regards INFORMATION, this term is primarily related to *cost*, *economy* and *industry*, and also to the network which includes the theme *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.

Figure 5. Thematic network with most frequent themes



Source: The authors

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.

CONCLUSIONS AND CONTRIBUTIONS

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 the ISIWoS. Using a co-words analysis, we have extracted the visual structure and evolution of this area of knowledge.

The bibliometric 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** 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 topics 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.

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* programmes applied to the banking or insurance sector, new specific financial products and the analysis of communication costs.

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, 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.

Limitations and future research

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. 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 such as those proposed in Franceschini & Maisano (2010) and Cobo *et al.* (2011a) (e.g., the h-index and variants) in order to determine the influence of journals on the development of scientific knowledge in certain disciplines.

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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