



INSURANCE BROKERS' BEHAVIOUR: THE EFFECT OF POLICY COLLECTION ON MANAGEMENT DECISIONS

El comportamiento del bróker de seguros: decisiones en la gestión de cobro

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KEYWORDS

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Sizes and Sales*

ABSTRACT

Spanish legislation on insurance and reinsurance mediation stipulates that intermediary can only receive commissions and fees for the management of their policies and prohibits any other form of remuneration. However, it is possible that financial intermediaries who manage larger risks wait until the end of the legal deadline to settle with insurance companies. This common practice in the insurance market hides additional remuneration in defiance of the law. It also means that the risk is not covered within the prescribed period and would, involve a commercial payment to the client, and, on the other hand, affect sustainable claims management.

PALABRAS CLAVE

*Corredor de Seguros
Rendimiento Operativo
Cobro de la Prima
Cobertura del Riesgo
Aplazamiento del Pago
Modelo de Regresión
Tamaños y Ventas*

RESUMEN

La legislación española de mediación de seguros establece que los mediadores pueden recibir comisiones y honorarios por la gestión de sus pólizas y prohíbe otra forma de remuneración. Sin embargo, los intermediarios financieros que gestionan riesgos mayores esperan hasta el final del plazo legal para liquidar con las compañías de seguros. Esta práctica en el mercado de los seguros supondría una remuneración adicional que desafía la ley. También significa que el riesgo no se cubre en el plazo establecido y supondría, por un lado, un pago comercial al cliente y, por otro, afectaría a la gestión sostenible de los siniestros.

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1. Introduction

The adaptation of the legislation to the new environment considers the incorporation of agents and technological advances that significantly reduce the time and costs involved in the satisfaction of customers' demands. Thus, the increasing number of online transactions has led to the consideration of the Internet as an ideal distribution channel for the marketing of standard products rather than investment products, which require specialised advice. Therefore, emerging technology-riven innovations in the insurance industry are a recent trend according to Marano (2019). In this line, (Merello et al., 2022) suggest that financial industry has evolved due to the disruptive innovation and technologies, and the digitisation process is affecting all markets and raising consumer awareness about companies' sustainable behaviour.

With all this, extending the analysis to insurance brokers, we find that they stand out because of their high autonomy in the development of their activity within the distribution channel. Brokers' primary role is to provide insurance coverage on behalf of their clients. Additionally, brokers may be engaged, among other activities, in consulting, wholesale or reinsurance activities, alternative risk financing, risk analysis and human resource consulting activities (Boadi *et al.*, 2013).

Regarding previous evidence on studies of operational performance in the insurance industry (Barber & Lyon, 1996; Boubakri & Cosset, 1998; Greene & Segal, 2004; Malik, 2011; Lee & Lee, 2012; Pointer & Khoi, 2019), studies have been conducted primarily on perceived value and customer satisfaction in countries with deregulation such as Italy, France, Portugal and Spain (Europe), Latin America, Ghana (Africa), Jordan (near East) and Japan, Pakistan, Taiwan and Vietnam (Asia). On the other hand, countries with high regulation include Anglo-Saxon countries such as the United States and the United Kingdom. However, there are fewer studies on the collection premium provided by insurance brokers, especially regarding deferring premium.

To fill the gap in the literature, this study investigates aspects like operating performance and the collection management of policies premium to this end, we analyse a common practice, which consists in deferring the premiums charged to clients in order to invest them in short-term financial products.

It is evident that the transfer of the collection management of the receipts to the insurance company speeds up the processing in the event of a claim and could even save administrative resources for an intermediary in the insurance market. However, the transfer of confidential data to the insurance company, such as collection management data among others, implies costs that are difficult to quantify for the intermediary.

The paper is structured as follows. First, the literature review presents previous research on the relevance of insurance brokers, with a presence that varies according to the distinctive features of each insurance market. Second, the process of managing the collection of an insurance brokerage. Third, the method section describes the methodology used to analyse the sample based on information from the databases and the sector's annual reports consulted. The sample consists of 397 insurance brokerage firms in Spain included in the Iberian Balance Analysis System [SABI] database between 2013 and 2017. Finally, conclusions are presented.

2. Literature Review

Mediation in the insurance industry is subject to regulation in different countries in a context of free competition. Typically, a broker has contracts with a number of insurers and is compensated by way of commissions paid by the insurers who offer the coverage. As a general rule, when a broker agrees to sell a policy to a client and obtains a commission in return, the broker has a duty towards the client to act with reasonable care, skill, and diligence.

In particular, in the German insurance market, insurance brokers may provide advisory service of higher quality and better suited to the needs of the clients than that of insurance agents. Thus, advisory services are influenced to some degree by the firm's size and the employment structure of insurance brokers, as well as by the degree of specialization on private clients (Eckardt, 2002 & 2007). They can reach economies of scale and perform fixed cost investments in human capital and technology to easily gather information about product prices, performance and terms (Rose, 1999).

In the US insurance market, the brokerage segment of the industry is highly concentrated. The main differences between independent agents and brokers are size and the range and depth of services provided (Cummins & Doherty, 2006). In general, brokers tend to service larger and more complicated business insurance needs. In this context, brokers' traditional role has been to find insurance for corporate clients, to negotiate the price and scope of coverage, and to advise clients on the design of their risk-management plan. In the USA, as in the UK and other European countries, brokers dominate the distribution of commercial insurance because these relatively deregulated and competitive environments allow them to influence insurers' choice and terms (Doman *et al.*, 1999). In Taiwan, some insurance brokers apparently sell insurance to high-risk customers so that more sales compensations can be earned by the broker (Tseng & Kang, 2014).

Since 2010, researchers have become interested in investigating how service providers engage in sustainability initiatives to increase profit, enhance customer satisfaction, strengthen the community and protect the environment. There are previous studies on services, especially on perceived value and customer satisfaction in Vietnam (Nguyen *et al.*, 2018). On the other hand, other studies examine the factors that determine the profitability

of insurance brokers in a developing economy such as Ghana (Owusu-Sekyere & Kotey, 2019). Thus, the collected premiums paid by the client to the insurance broker, for instance, is the issues discussed in this study.

Regarding the Spanish intermediary market, and in accordance with the Spanish financial system, the activity of insurance intermediaries is subject to a single supervisor: The Directorate General for Insurance and Pension Funds. In this manner, Law 26/2006 of July 17 and regulates insurance mediation and private reinsurance (BOE,2006) and Royal Decree-Law 3/2020 of 4 February on urgent measures transposing into Spanish law various European Union directives in the field of public procurement in certain sectors; private insurance; pension plans and funds; taxation and tax litigation (Royal Decree-Law, 2020) where the compensation received by the broker from the insurance company will be in the form of commissions that are satisfied, on the one hand, through the payment of premiums to the insurer and, on the other hand, through fees the broker bills directly to the customer.

In this vein, the new Spanish Law on Private Mediation Insurance and Reinsurance states that intermediaries can only charge commissions and fees (Latorre, 2015a) for insurance policies they have mediated, and forbids any other form of traditional remuneration such as production incentives (volume discount) or compensation for a good claims portfolio, as stated in the article 29 relations with insurers and customers in Law 26/2006 of July 17, insurance mediation and private reinsurance (BOE, 2006). Specifically, we focus on the possibility of deferring the payment to insurance companies of premiums collected from clients. In this case, the broker collects the premiums payable under the client's insurance policy but does not immediately send the funds to the insurance company. Instead, the broker waits until the end of the legal period (e.g., 50 days in Australia or 30 days in Spain) and uses this money in the meantime either to make business-related payments or invest in short-term assets in order to obtain an extra return.

In this line, and according to the methodology used in this work, several previous studies have analysed operational profitability and the different relevant factors in the insurance industry. These studies have focused on the insurance industry of different countries such as Ghana, Jordan, the United States, Pakistan, Taiwan and Vietnam. They are in line with the methodology used in this work, operating performance, which allows us to analyse alternative factors (Barber & Lyon, 1996; Boubakri & Cosset, 1998; Greene & Segal, 2004; Malik, 2011; Lee & Lee, 2012; Boadi *et al.*, 2013; Pointer & Khoi, 2019).

3. Management Decisions in an Insurance Broker

In this section we present the reasons that favour whether the collection management should be carried out or not by an insurance brokerage. Thus, at a time when the evolution of one-year Euribor interest rates are at its lowest levels, we wonder if collection management is profitable. When considering this aspect, we cannot rely solely on the financial aspect, which is relevant, but it must also be considered that assuming the collection management implies bearing costs of personnel and facilities. However, the essence of the insurance mediator activity is based on his performance as an "independent agent" as presented in his work (Azofra-Pelenzuela *et al.*, 1999), which he extrapolates towards his relationship with the client, an important fact to be taken into consideration.

Insurance intermediaries as presented in their work (Kurland,1996) are a type of agents that, although they achieve high commissions, are more independent from the insured, therefore, they have less administrative support than exclusive agents. In addition, another relevant aspect that is presented in this work states that the policyholder's payments to independent agents are not considered payments to the insurance company until the receipt is sent to the client, with the implications that this would entail.

3.1. The collection management of the insurance broker vs insurance company

There are two reasons why an insurance broker would be interested in having collection management assumed by the insurance company, namely: It facilitates the management of the intermediary by not having a structure that allows the control of production and its effective collection management. On the other hand, imposition in the form of collection by the insurance company, as deemed necessary by the type of risk, the attention and management of the possible claim.

That is, we could say that those insurance brokers for whom the size of their companies are small could be interested in having the insurance company assume the collection management in order not to face management costs and risks. However, the reasons that would motivate the collection management by insurance brokerages would be: First, strengthen the relationship with the client by keeping the entire production process under the supervision of the brokerage, which allows to provide a better service to clients, generating an important added value for the organization. Secondly, reduce the opportunity cost by not managing the collection of premiums by the insurance brokerage. In this way, the loss of real financial profitability through treasury management would be avoided, an aspect considered in this work due to the low interest rates of the Euribor at this time. Lastly, consider in the negotiation of the commission table by branch that is agreed and received from the insurance company, the financial profitability that is no longer obtained by not developing collection management.

3.2. Risk Coverage

In this line of work, it must be considered that for certain risks a collection management by the insurance company is advisable. Thus, a clear example is the case of the fleet business, since it is a branch that due to the volume of receipts that have to be managed and their collection in specific periods of time requires, on the one hand, a very specialized monitoring and, on the other hand, have a collection management with a computer support that allows the issuance of massive remittances in certain periods of time with prior notice to the client. With respect to other branches such as the business of public administrations, credit, temporary disability, and others, it would not be problematic a collection management assumed by the insurance brokerage, due to the particularities of the risk.

Regarding the receipt that is generated in an insurance policy, it is necessary to consider whether the receipt is for a new policy, or it is the receipt for a portfolio policy. Portfolio receipts are for policies older than one year. In addition, it must be considered if the payment of the premium is annual or fragmented, that is, if the amount of the insurance premium is collected once or several times within a year. As a consequence, it will be more feasible to direct debit portfolio receipts, since there is a history in the relationship with the client, the receipts whose total premium is fragmented (it is charged more than once within a year) and, finally, the policies whose receipts are not of a very high amount, since the client is reluctant to give the mediator the account number for risks whose premium is very high as it could generate a deficit in the current account. In the latter case, and for the policies of new clients, the form of collection by bank transfer or bank check is more feasible. In the case of promissory notes, the problem that arises is that they become effective at maturity. If they are returned and the receipt was given to the customer, the broker has a considerable problem because he did not actually collect the receipt and the customer, if he had a claim, would demand the payment of compensation for it. If the insurance company refuses, you could fall into what is known as a "business payment."

In this way, the management of remittances in computerized support aims to improve the system for collecting direct debits by an insurance broker. Therefore, in this section we comment on the main operational advantages in the application of the collection management of remittances of debts online and that we indicate below, on the one hand, improve the control and monitoring of portfolio remittances, which are going to be charged to clients, with the possibility of communicating with the client the date of the charges that they will have in their bank account well in advance. Thus, it allows reducing the percentage of non-payments due to the return of remittances as there is no liquidity in the current account with the consequent financial savings that does not bear the costs of returning remittances. On the other hand, reduction of pending receipts with the insurance company. Encourage coordination in collection management, establishing certain collection dates that provide a better knowledge of our treasury availability to face payments and optimize treasury points.

Thus, the liquidity engine of the brokerage would be favoured and could be reinforced by the following actions, on the one hand, speed up the policy issuance term by the insurance company and its delivery to the broker. On the other hand, reduce the time for reviewing and sending the policy and debiting the client together (invoice sent), after recording in the brokerage management system. Recommend for policies with high premiums to hand it over in person. Regarding policies that cover minor risks, a shipment can be made by mail. Thus, a punctual and correct delivery will favour invoicing without incidents and improve the collection management ratio. Regarding billing, ensure that from the date of departure from the broker's office until the expiration of the debt, the minimum number of days' elapse. In this way, by reducing this period, investment in customers will be less. Another relevant and topical issue is those questions that focus on the main types of data used by cyberinsurance professionals, especially for decision-making in the insurance underwriting and claims processes (Nurse *et al.*, 2020).

3.3. The collection management objective

A correct fulfilment of the previous sections in the collection process will allow the company to achieve the collection management objective it pursues, reducing the investment in the customer account, as we have previously commented. Thus, the collection period reduction techniques will make it possible to streamline this process described above and should focus on, act to reduce the administrative lag period, a period of days from the date of issuance of the debt and its shipment to the client¹. In this way, lines of action could be established to reduce the premium collection period, specifying in the request for quotation, invoicing, the commercial term, the delay period and, finally, the financial term. We comment on each of them below:

The request for quotation by the client, carry out the risk assessment once the acceptance by the client has been confirmed, speed up the reception, registration of the policies and shipment to the client. Thus, once the client has the policy in less time, the collection process can be started earlier. In this regard, some measures that could be applied would be: First of all, quickly manage the transmission of the client's risk coverage requests, favouring direct connection by computer (via e-mail) or by fax to the executive responsible for the account, Secondly, likewise, the client must be informed that the advice provided is based on an objective analysis that includes the

1 Be aware that the collection period starts from when the debt comes out of the broker's office until it is credited to your checking account.

study of a sufficient number of insurance contracts on the market. It will be presumed that such an analysis has existed when the broker has analysed, in a general way, insurance contracts offered by at least three insurance entities that operate in the market of the risks covered by coverage or when it has specifically designed the insurance contract and has negotiated with at least three insurance entities (article 42.4), as indicated (Latorre, 2015a & 2015b). Lastly, develop a control file of customer requests that allows monitoring of the phase in which they are through the policy issuance department. In conclusion, customer requests must be controlled, and a policy monitoring protocol must be established, prioritizing the most relevant volume and risk coverage.

The Billing, establish measures to promote rapid billing such as shipping or delivery of the policy and unified debts or avoid partial deliveries, and therefore, very numerous billings and drafts. That is, the shipments of policies and debts should be concentrated. In addition, it is necessary to verify that the debts are correct both the shipment to the appropriate address, person, or department responsible, indicating the form, date, term, and place of payment.

The commercial term, agree with the client the form of payment, with a differentiated treatment between the payment terms according to the characteristics of the clients. In addition, implement fixed collection days especially in remittances and avoid billing errors that can lead to defaults and additional financial costs. Also, carry out a statistic of the most frequent administrative failures and propose their solution. Finally, define a special collection management strategy for high-value invoices and compute the expiration of invoices by days and not by commercial months.

The delay period, identify defaults, communicate by phone with the delinquent client and send a written communication of the incident, prioritizing high premiums.

The financial term, change the way of collection of checks, letters, and transfers by direct debit bills, reducing the number of days of collection and centralized bank accounts for their entry.

Use of financial instruments, act through a means of collection appropriate to the type of client, establishing a cost / security balance and carrying out a process of reviewing periodic collection instruments. Thus, the most appropriate collection instruments can be bank checks and centralized accounts that reduce costs and delays. Direct debit of receipts should reduce administrative work and promote bank transfers due to its speed and cost (Latorre, 2015b)

4. Objective and Hypotheses to be tested

The objective of this research is to determine whether brokers in the Spanish insurance market receive additional remuneration outside of what is stipulated in insurance and reinsurance legislation in the process of managing the collection of insurance premiums and how this behaviour could affect risk coverage.

Considering previous theoretical arguments and empirical evidence from the “Insurance brokers” section, we present the following hypotheses:

In order to test H1, we take into account the collection management of Spanish broker firms in the insurance industry. Previous literature (Directive 2002/92/EC, paragraph 4.a) shows that a determinant of this activity is the quick transferral of the collected premiums—paid by the client to the broker—to the insurance company lest there is an incident that must be managed by the insurance company (Directive 2002/92/EC on Insurance Mediation). Thus, this relevant issue that affects the insurance broker is the management of intermediate premiums collection. The activity of an insurance broker is characterised by a high autonomy, which could imply higher administrative costs than those borne by another type of agent in the insurance mediation market. Therefore, the insurance broker that manages the collection of the premiums of the clients could compensate these administrative costs by looking for a financial return (Latorre, 2015a; Latorre & Farinos, 2015; Bacilar, 2017):

Hypothesis 1 (H1). *The broker does not carry out an adequate collection management of the insurance premiums of its clients and it would have negative effects on the provision of risk coverage by the insurer.*

5. Sample and Methodology

5.1. Data and Sample Selection

This section explains the sample used in this study. In Spain, the market for insurance intermediaries has been traditionally characterised by the presence of small enterprises. Nowadays, and as a consequence of globalisation, large insurance-mediation companies have appeared in the Spanish market. As a result, large companies broker the most complex and highest risks, while small companies deal with lower risks. The sample is made up of large insurance brokers. This choice increases the reliability of the statistical inferences that can be obtained, given that it includes more data that can be optimally measured regarding the collecting premium.

Our sample comprised 397 insurance broker firms in Spain included in the SABI database from 2013 to 2017. Thus, our temporary horizon covers one crisis year and four post-crisis years. We consider a crisis year any year when Spain had a negative gross domestic product (GDP). The necessary economic and financial information for this research comes from the SABI database. SABI dataset is released by Bureau van Dijk Electronic Publishing.

5.2. Descriptive characteristics of the sample

Table 1 shows some characteristics of the firms in the sample according to the valuation periods. As explained in the section 5.1., if a broker firm systematically defers the premiums charged to its clients in order to invest in short-term financial assets, that firm is expected to have a high financial income. We proxy the collecting ratio of insurance brokers, computed as financial income divided by sales. At the end of each natural year all the firms in the sample were ranked on their *collecting premium responsibility ratio*. Table 1 exhibits the summary statistics for the full sample.

From our point of view, this evidence is consistent with the fact that large broker firms have enough resources to deal with the risk of holding onto premiums collected from clients for the maximum period allowed. Therefore, broker firms have more incentives to delay forwarding the payment of the premiums to the insurance company than small broker firms, which could suffer financial distress in the event of an incident. Consistent with this evidence, several authors find that brokers' advisory services are influenced to some degree by firm size and quality service (Rose, 1999; Nguyen *et al.*, 2018; Owusu-Sekyere & Kotey, 2019).

To test hypothesis 1, we have consulted the financial and accounting database of insurance brokerage companies, in accordance with the definition given by the Law 26/2006 of 17 July on mediation of private insurance and reinsurance (BOE, 2006). The sample includes companies whose accounts are in the mercantile register, according to information obtained from the database consultation Iberian Balance Analysis System (IBAS).

Table 1. Summary statistics for the full sample of insurance brokers and classified by collecting premium responsibility ratio

Year	2017	2016	2015	2014	2013
Full Sample					
Sample size	397	397	397	397	397
Total assets (thousand €)	2,091.39	2,024.31	1,872.17	1,801.75	1,704.89
Sales (thousand €)	2,035.51	1,885.49	1,703.07	1,552.49	1,372.42
Financial income (thousand €)	45.67	20.31	20.34	27.06	30.54
Collecting Premium Responsibility ratio (%)	2.24	1.08	1.19	1.74	2.23

Notes: (i) The *Collecting Premium Responsibility ratio* is computed as financial income divided by sales. Source: Own elaboration (2022).

5.3. Estimation of accounting ratios to measure operating performance of the insurance brokers

In the Table 2 we show a common way to measure profitability is the use of return on sales (ROS), return on assets (ROA), and return on equity (ROE), we deflate the sales revenue and income data, respectively, using the appropriate Gross Domestic Product (GDP) deflator.

Table 2. Summary Economic characteristics and proxies examined for insurance brokers

Proxies	Description	Characteristics
Return on assets (ROA)	= EBIT/Average total assets	Profitability
Return on equity (ROE)	= EBIT /Average total equity	Profitability
Return on sales (ROS)	= EBIT/Sales	Profitability

Source: Own elaboration (2022).

5.4. Regression analysis estimates of the Collecting premium responsibility ratio for the sample

We employ conventional OLS regression analysis methodology in order to analyse the relationship between firm operating performance and collecting premium responsibility. We proxy operating performance through Return on Sales (ROS), Return on Assets (ROA) and Return on Equity (ROE) measures. In addition, we employ Total Assets and Sales as control variables following the majority of the studies measuring the effect of firm size on

profitability since the seminal work by Kurland (1966), which shows a positive relationship between firm size and profitability.

Therefore, we run the regression model in equations [1] and [2] for every year in the horizon under study (2013-2017):

$$R_{it} = a_i + b_i \text{ COLLECTING}_{it} + s_i \text{ SIZE}_{it} + e_{it} \quad [1]$$

$$R_{it} = a_i + b_i \text{ COLLECTING}_{it} + h_i \text{ SALES}_{it} + e_{it} \quad [2]$$

where R_{it} stands for the operating performance proxies (ROS, ROA, ROE) of firm i in the year t , COLLECTING_{it} is the collecting premium responsibility of the insurance broker of firm i in year t , SIZE_{it} is the log of Total Assets of firm i in year t , and SALES_{it} is the log of the sales of firm i in year t . Heteroskedasticity has been corrected using White's methodology.

Tables 3 and 4 show the results of the regression of equations [1] and [2] for the different proxies of operating performance and all the years when we control for firm size and sales, respectively. Table 3 exhibits the existence of a negative and significant relationship between the operating performance measures employed and the variable representing the collecting premium regardless the operating performance proxy employed for the years 2015-2017. Results for 2013 and 2014 are mixed, as we find that the statistical significance depends on the proxy employed. Consistent with previous literature, the relationship between operating performance and firm size is positive when it is significant. It is worthy to note that this relationship seems to be more evident when operating performance is measured through the ROA.

When we employ sales as the control variable (see Table 4) the results are not as robust as before. On the one hand, we find the relationship between operating performance and the collecting premium variable to be either positive or negative when it is significant. In any case, these discrepancies concentrate in the years 2013 and 2014. For the rest of years all the significant coefficients are negative. As in the case of controlling with size, we find a positive and significant relationship between ROA and Sales for every year of the study. However, results for ROE and ROS are mixed.

Table 3. Regression model formed by the sample of insurance brokers in the insurance market

Panel A ROA	2013	2014	2015	2016	2017
Collecting	-0.00 _a	-0.00	-0.00 ^a	-0.00 ^a	-0.00 ^a
Size	0.00 ^a	0.02	0.00 ^b	0.01 ^b	0.01 ^a
Adjusted R-squared	5.60	5.73	2.08	5.56	5.31
Panel B ROE					
Collecting	-0.24	0.04	-0.20 ^a	-0.00 ^a	-0.00 ^a
Size	0.03	0.12	0.05	0.03	0.03 ^a
Adjusted R-squared	25.96	3.96	31.60	4.10	1.57
Panel C ROS					
Collecting	-0.24 ^a	0.04	-0.20 ^a	-0.02 ^a	-0.00 ^a
Size	0.03 ^a	0.12	0.05	0.03	0.02
Adjusted R-squared	25.96	3.96	31.60	0.04	0.06

^{a, b, c} Significantly different from zero at the 1%, 5% and 10% level, respectively, using the t -test.

Source: Own elaboration (2022).

Table 4. Regression model formed by the sample insurance brokers in the insurance market

<i>Panel A ROA</i>	2013	2014	2015	2016	2017
Collecting	0.00 ^c	0.00	-0.00 ^a	0.00	0.00
Sales	0.01 ^a	0.02 ^c	0.01 ^a	0.01 ^a	0.01 ^a
Adjusted R-squared	5.73	5.73	6.70	5.56	5.31
<i>Panel B ROE</i>					
Collecting	0.00 ^a	0.00	-0.00 ^b	-0.02	-0.01 ^a
Sales	0.00 ^a	0.02 ^b	0.00	0.06	-0.11
Adjusted R-squared	5.36	2.81	48.60	6.67	3.64
<i>Panel C ROS</i>					
Collecting	-0.2 ^a	0.04	-0.2 ^a	-0.02 ^a	-0.01 ^a
Sales	0.04 ^c	-0.07	-0.9 ^c	0.06	-0.11
Adjusted R-squared	26.77	1.33	32.90	6.76	3.64

^{a, b, c} Significantly different from zero at the 1%, 5% and 10% level, respectively, using the *t*-test.

Source: Own elaboration (2022).

In summary, the results to support Hypothesis 1 for brokers in the *collecting premium responsibility* ratio. They have a worse behaviour in the management of the premium collections of their clients.

6. Conclusions

This study examines the relationship between the collecting management of insurance policies of Spanish brokerage firms in the insurance industry and their operating performance. We focus on a common practice, which consists in deferring the premiums charged to clients in order to invest them in short-term financial products and, as a result, gain an extra financial return in addition to their traditional sources of income.

In this context, we proxy the collecting premium behaviour of insurance brokers through a collecting premium responsibility ratio computed as financial income divided by sales. In this way, a high value for the *collecting premium responsibility ratio* means that the insurance broker delays payment of the collected premiums to the insurance company. Note that this practice leads to the broker assuming some risk derived from the possibility of an incident taking place before the premium has been forwarded to the insurance company, since the brokerage firm would suffer financial distress.

Our results show that firms with the worst collecting premium behaviour (that is, those with the highest *collecting premium responsibility ratio*) are large companies that experience a statistically greater profitability (measured as return on sales). In addition, this negative collecting premium behaviour could owe to the need to compensate for the management costs of the collection of insurance premiums. Thus, we tested the hypothesis that the broker has a customer orientation in the management of the policies of his or her clients which has a positive effect on risk coverage. Therefore, collecting premium insurance brokerage would be encouraged. On the other hand, the structural variable size positively influences the quality of the service provided by the insurance broker to his or her clients. Therefore, larger companies could better serve clients. Consequently, these brokers could exhibit better collecting premium behaviour while serving businesses that assume greater risk coverage. In this way, they would promote a better risk-prevention performance of the business insured. In this case, there may be a collecting premium insurance brokerage.

Finally, our evidence suggests that there is a statistically significant relationship between operating performance and some firm characteristics (such as size), and the brokerage firm's collecting premium responsibility.

Furthermore, Future research could extend the study horizon of the sample and consider the behaviour of insurance brokers in an environment of rising interest rates and increasing remuneration for short-term financial products. In addition, future research should focus on the sustainable performance of the insurance distribution channel in terms of the extent to which insurance brokers are geographically distributed to cover climate change risks.

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