

# Development of the Insurance Markets in Latin America and the Caribbean: An Empirical Analysis

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This article analyzes several economic and non-economic variables affecting insurance market effectiveness across the countries of Latin America and the Caribbean using a survey of insurance participants: insurance companies, superintendents, and associations of insurance companies.

## Introduction: The Current Situation in Latin America

The Inter-American Development Bank (IADB)—together with the Regional Association of Insurance Companies (Fundación Interamericana de Empresas de Seguros, FIDES) and the Regional Association of Supervisors (Asociación de Supervisores de Seguros de Latinoamérica, ASSAL), and the International Insurance Foundation—is coordinating a policy-oriented research initiative on the status of the insurance industry in Latin America. The first systematic survey of insurance players and participants in the region analyzes the factors that affect the development of insurance markets. The IADB-FIDES-ASSAL-IIF research effort will support the formulation of policy recommendations with a longer-term view. Its aim is to highlight the role of insurance in the development of capital markets and, thus, on overall economic growth.

Insurance markets in Latin America and the Caribbean are relatively underdeveloped, with significant differences between relatively developed countries, such as Brazil and Mexico, and poor countries, such as Bolivia and Honduras. Nevertheless, throughout the region there is a growing demand by the private sector, insurers, and related agents for a stronger insurance sector. Premium volumes totaled about 2 percent of the region's gross domestic product (GDP)—vis-à-vis Europe's 7 percent, Asia's 4 percent, and the United States' 8 percent—and just 1.6 percent of insurance business worldwide. Most of the insurance business is concentrated in a few countries; Argentina, Brazil, Chile, Colombia, Mexico, and Venezuela accounted for more than 90 percent of premiums (Swiss Re 2004). This pattern implies that there is room not only for more insurance market penetration, but also for a better, more effective insurance market.

The level of insurance premiums in Latin America does not match other indicators for the region, such as population (which represents about 6 percent of the world's population), and GDP (which is about 8 percent of the world's GDP), showing the relative underdevelopment of the insurance industry in the region.<sup>1</sup> The challenge is to identify which factors hinder and which promote the development of insurance.

## The Policy Framework of the 1990s

The 1990s witnessed drastic policy shifts in Latin America, which opened the way for privatization, liberalization, and deregulation—efforts aimed at strengthening financial markets in the region, among them the insurance market. A brief summary of these efforts follows.

**Table 1**  
**Market Share of (≥50%) Foreign-Owned Insurers**

Latin America	Life	Non-Life
Brazil	32%	43%
Mexico	75%	58%
Chile	62%	63%
Argentina	53%	35%
Venezuela	39%	50%
Colombia	38%	46%

## Privatization

State involvement in the economy and the number of state-owned enterprises diminished considerably in the region in the 1990s. With the exception of the state-owned insurer La Previsora in Colombia and the reinsurance monopoly in Brazil, none of the major insurers in the large Latin American and Caribbean markets remain state-owned. Private insurers now write workers compensation insurance in Argentina and Chile, and Chile recently introduced a privately-run unemployment insurance scheme (Swiss Re, 2004).

## Liberalization

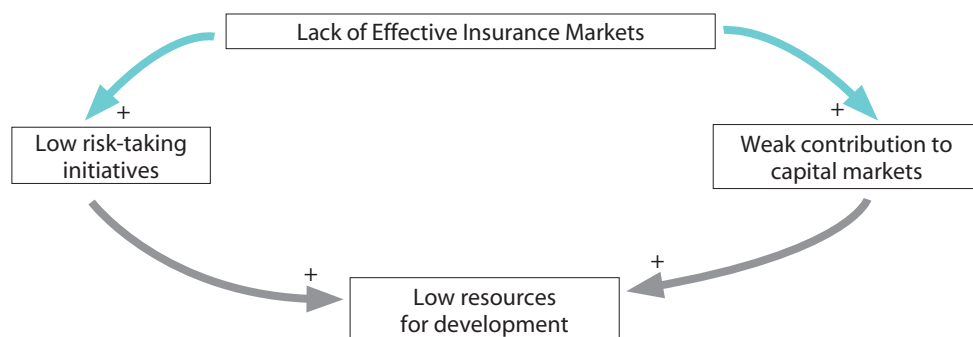
Latin American financial markets (including stock markets) and the capital account of the balance of payments were liberalized to open the door for more foreign capital. In particular, foreign insurers were expected to provide new capital and know-how in the form of more sophisticated insurance products, and distribution channels for reaching a broader spectrum of people. The reduction of barriers to entry prompted many international insurers to enter Latin American insurance markets. Mergers and acquisitions accelerated, and the market share of foreign insurers now ranges from 30 percent to 75 percent. (See Table 1.)

**Table 2**  
**Response Distribution to Questions about the Effectiveness of Insurance Markets in LAC (Percentage)**

	<b>Insurance coverage is too costly.</b>	<b>Insurance products are too complex and not too well explained.</b>	<b>Process of submitting claims is uncertain and unreliable.</b>
a) completely agree	19.23	21.29	5.81
b) agree	55.77	54.84	34.84
c) neutral	17.31	13.55	31.61
d) disagree	5.77	10.32	27.10
e) completely disagree	1.92		0.65

Source: IADB/FIDES/ASSAL Survey

**Figure 1**



### Deregulation

Across the region, reforms in securities markets supervision, governance, and market infrastructure accelerated rapidly in the 1990s. With new trading platforms and lower transactions costs, the region as a whole seemed market ready.

Despite these changes, insurance markets remained shallow, and insurance penetration remained low. For example, recent household surveys that ask about access to health insurance show that only 8 percent of the households in the seven countries surveyed have some type of private health insurance. (The average for poor households was

2 percent.) Compared to developed countries (United States, 68 percent, and Australia, 45 percent), these numbers highlight the relative underdevelopment of insurance markets in the region.

Moreover, beyond the low levels of market penetration, the quality or effectiveness of insurance also remains weak. Our survey identified three principal shortcomings for insurance markets in Latin America: insurance products are considered too expensive, they are too complex for consumers to understand, and the process of submitting claims seems too uncertain. (See Table 2.)

### The Role of Insurance Markets

In general, the existence of insurance markets facilitates economic activity. Risk-averse individuals are willing to pay a fair premium to ensure compensation against the occurrence of a specific event in the future. For each insurance company, the law of large numbers predicts that when the number of contracts increases and the policy is appropriately priced, the company profits in the long run and is motivated to undertake the risk. This activity promotes economic growth.

Insurance not only facilitates productive activities but also contributes to the development of the financial sector. (See Figure 1.)

Insurers enter the market with equity capital and issue policies, which are a form of debt capital. They invest the funds raised until needed to pay claims. An effective insurance sector facilitates risk sharing, but it also plays a crucial role in the investment of savings, an essential component of financial reform, and capital market growth.

The liabilities of insurance companies are mostly long-term, and thus constitute a natural complement of capital market development. Insurer assets are partly invested in equities and government and corporate bonds, all typical instruments of a developed capital market. The investments that insurance companies make in corporations and other capital assets not only help improve capital allocation but also help enhance monitoring performance.

On the other hand, insurers are exposed to several risks. *Solvency risks* involve technical and investment risks. *Technical risks* consist of two types of risk: underpricing and under-provisioning. Underpricing is a situation in which the insurer attracts buyers by setting rather low premiums, and then the reserves set aside are not adequate to cover potential

claims. In an under-provisioning case, the technical reserves are inadequate to meet the insurer's obligations. *Investment risks* are generated by the insurer's role as a financial intermediary, a risk similar to those of banks with respect to insolvency. Furthermore, there are: the risk of default by a partner (e.g., reinsurer), risk of mismanagement, and systemic risk. The information and data needed to assess the insurer's solvency are usually unavailable to buyers of insurance. Thus, they cannot assess the financial strength of their insurer and the quality of the insurance contract, which partly explains the lower coverage in some countries.

Insurance buyers' perceptions of the quality of supervision as well as the requirements for capital adequacy have an important impact on the development of insurance markets. Therefore, public policy matters, particularly in identifying when the government should intervene to avoid under-provisioning and other potential financial disruptions. Even though the argument for regulating the banking business is stronger because banking is subject to liquidity crises (i.e., systemic runs on banks and the so-called contagion effect), whereas the insurance business can diversify its risk portfolio through reinsurance, insurance requires supervision as well. In addition, good insurance supervision is needed for the integration of world insurance markets, which depends on an adequate regulatory framework in each individual country.

## Important Factors to Foster the Development of Insurance in Latin America and the Caribbean

Specific variables linked to insurance and financial market development include the legal system, governance, enforcement, and institutional aspects. Swiss Re (2004) has analyzed these factors mostly from the point of view of the opportunities for business. According to their analysis, among the main economic factors that determine the growth of insurance are: (1) the level of savings; and (2) GDP per capita. They have a positive impact on insurance but also benefit from

the existence of insurance contracts. Nevertheless, Enz (2000) studied the relationship between demand for insurance and GDP, concluding that other factors (e.g., taxation, regulation, insurance provided by the government) limit insurance penetration.

Along with the distribution of wealth, the legal system and property rights, the availability of insurance products, regulation and supervision, trust, and risk awareness, the Swiss Re analysis found that other non-economic factors also influence the development of insurance: religion, culture, and education among them. In a further step of the analysis, specific factors are identified for life insurance and non-life insurance. For life, they include economic stability (e.g., inflation, exchange rate), demography, the tax system, the savings rate, and the pension system. For non-life, they include regulation (e.g., compulsory insurance), claim awards, exposure to natural disasters, and the public sector's role in health.

The "dependent" variable of the analysis is the extent to which the insurer successfully facilitates the insurance process and becomes the overarching criterion for effectiveness. How quickly, how cheaply, simply, and reliably an insurance company administers its policies determines how effective it is in satisfying the policyholder's needs.

In deep insurance markets, such as those of Europe or the United States, profit maximization and competition encourage insurance market effectiveness. In relatively shallow insurance markets, such as Latin America and other emerging regions, improving the groundwork for a more effective market warrants more attention.

## Empirical Analysis of Insurance Markets in Latin America and the Caribbean

The analysis that follows explains the factors—both economic and noneconomic—that hinder the

development of the insurance markets and their effectiveness in the region. Some factors are exogenous; others are within the scope of public policy. Two different empirical models, using data from the survey, identify the effect of particular variables on insurance effectiveness. Since the research is still at an early stage, any conclusion or recommendation derived from it should be taken with caution.

The analysis suggests that countries with a strong rule of law, more rigorous supervisory agencies, and more political and economic stability tend to exhibit more "effective" insurance markets. Economic and political stability influences the development of the insurance industry in several ways. First, the demand for insurance depends on customer confidence in obtaining real benefits in the event of a claim. This confidence is weakened by high inflation, depreciation or devaluation of the currency, changing currency and monetary restrictions and/or guidelines. Second, governments need a minimum of economic and political strength to be able to support the insurance market, which is in itself a long-term goal of many developed countries.

## The Survey: Data, Methodology, and Results Data

A regional survey obtained data from industry superintendents, associations, and insurance companies about the various variables. Responses came from 18 industry superintendents, 19 industry associations, and 126 insurance companies that make up the insurance market in Latin America and the Caribbean. The analysis of the survey seeks to establish the impact of changes in the independent variables on the effectiveness of insurance markets in Latin America, which represents the dependent variable.

Each individual question measured one or more variable of the country's insurance market. To simplify the quantitative analysis, all the survey questions are

closed. A scale in which items or variables represent different subconcepts of the uncovered variable or factor and responses are covered to indicate different degrees of agreement or disagreement with the item. The majority of the responses are ranked on a scale of 1 to 5 (e.g., five categories of agreement and disagreement). Some questions are based on categories (e.g., income and education); others are yes/no questions (e.g., gender); and still others are list questions related to what can influence a certain behavior (e.g., buying insurance if income increases). The questions and the scale are designed so that items and variables can be used in regressions and also combined in factors for use in other types of analyses.

## Methodology

In order to measure the relationship between the factors mentioned in the previous sections, two approaches were followed. The first was to construct indices for each factor based on the mean of the values assigned to the relevant questions. For example, for the dependent variable, the Insurance Effectiveness Index was formulated from questions designed by insurance specialists, which covered effectiveness, information, funding, independence, enforcement, supervision, external events, and internal events. The items that best capture the notion of effectiveness of insurance markets were combined. The next step was to average the scores given to each item. The result was a continuous indicator of each one of the items included in the analysis.

The parameters of the equation were estimated using ordinary least squares (OLS) between the index and the independent variables making up the index. In addition, and because the items that make up the index are based on a ranking of values, it is more appropriate to estimate the effect using maximum likelihood (ordered probit). For the ordered probit estimation, it was also possible to estimate the marginal effects of a change in the independent variable

on each of the values that the dependent variables can take.

An additional equation was estimated including interactions of all the variables with dummies corresponding to the type of specialist interviewed (i.e., supervisor, FIDES, company).

## Results

With respect to the various factors relevant for insurance markets, the analysis presents a number of interesting conclusions:

- a. **Information.** The impact of this variable is not significant when taken for the composite indices, but it is significant in the context of the statement: “They are paying too much for insurance coverage.” An interpretation of this effect could be that better informational quality increases industry costs. Marginal effects show that an increase in the information index would raise the probability that respondents agree with the statement. The inclusion of other controls, such as income (measured as GDP per capita) and education (measured as the percentage of population with primary education), does not change the results.
- b. **Enforcement.** The most robust result from the pooled regression indicates that legal enforcement is strongly related to the effectiveness of the insurance market. The law enforcement variable is also significant in increasing the effectiveness index, as well as for two of the three variables that make it up independently. Because it is highly probable that the effects of all the independent variables are nonlinear, the interpretation of marginal effects should be taken with caution. In the sample, the effect of an increase of 1 in the enforcement index would be an increase of 0.17 in the effectiveness index.
- c. **Supervision effectiveness.** A major finding of the survey is that the more rigorous the supervisor, the greater the effectiveness of insurance markets as a whole. Specifically, the marginal effect of an increase in the “effectiveness of supervisor” index would be to increase the effectiveness index by 0.09. Although small, this is significant at the 10 percent level for the effectiveness index as a whole and at the 5 percent level for one of the individual components. Concretely, the marginal effect of an increase in the supervisor effectiveness index would be to increase the probability that people “disagree” with the statement “Insurance products are too complex and not well explained” by 1.3 percentage points. For the statement “The process of submitting claims for payment from an insurance company is uncertain and unreliable,” the marginal effect of an increase in the effectiveness of supervisor index would be to increase the probability that people disagree by almost 7 percentage points. With the inclusion of other control variables,

For the individual variables, it is possible to calculate the marginal effect for each option provided in the survey. For the statement “Insurance products are too complex and not well explained,” the effect of a marginal increase in the law enforcement index would be to increase by 5 percent the probability of people disagreeing with the statement. For the statement “The process of submitting claims for payment from an insurance company is uncertain and unreliable,” the marginal effect of an increase in the enforcement index would be to lower the probability of people choosing “completely agree” or “agree” by 6.6 and 2.3 percentage points, respectively. The inclusion in the analysis of the control variables weakens the significance of the enforcement variables, but they are still significant for the effectiveness index.



the supervisor indicator becomes insignificant at conventional levels.

- d. **External events.** The effect of external events was found to be as robust as the effect of legal enforcement; however, the marginal effects for this variable are larger. For the effectiveness index as a whole, the effect of an increase in the external events index (where a higher value represents less vulnerability to a mixture of external events, including economical, financial, and political issues) would be to increase the effectiveness index by 0.24. The effect is significant at the 5 percent level for two of the three components of the effectiveness index independently (the same ones used for the legal enforcement index). As an illustration of the results, the marginal effect of an increase in the external events index would be to lower the probability that people disagree with the statement “Insurance products are too complex and not well explained” by almost 6 percentage points. For the statement “The process of submitting claims for payment from an insurance company is uncertain and unreliable,” the marginal effect of an increase in the external events index would be to lower the probability that people disagree with this statement by more than 14 percentage points. With the inclusion of other control variables, the significance of the external events index is only affected for the statement “Insurance products are too complex and not well explained,” which becomes insignificant.
- e. **Differences between factors in the insurance market.** When looking at the different effects of the variables between factors in the insurance industry, it becomes clear that there are differences in the perception of relevant factors between supervisors and the rest of the sample. It is worth noting that the significance of the “effectiveness of the supervisor” impact on the effectiveness of the market becomes significant only for the supervisors.

## Conclusions

The results of the study and the discussion with the industry and the supervisory entities allow us to formulate policy recommendations aimed at making the insurance markets in Latin America and the Caribbean more effective and to better serve the people at the “bottom of the pyramid.” Recognizing the diversity of the region’s markets, the recommendations emphasize the following areas: (1) institutional strengthening that requires a commitment through both improved rules and a legal and judicial environment adapted to the characteristics and ad-hoc measures of each country; (2) effective regulation and supervision that comply with the Core Principles of the International Association of Insurance Supervisors (IAIS); (3) political and economic stability coupled with interventions to mitigate and transfer the risks of the natural environment; and (4) competitiveness to be promoted through measures such as standardized collection of reliable market information and broader coverage of social needs (e.g., obligatory insurance, agricultural insurance, and natural disasters insurance).

In that context, there is also a need to further develop the indicators of effectiveness for each country in the region; and undertaking the diagnostics of the current situation for specific countries.<sup>2</sup>

So far ASSAL, FIDES, and IDB agreed on a joint agenda for maximizing the effectiveness index of the insurance sector. ■

## Endnotes

1. Swiss Re 2002.
2. In Peru, for example, a survey was undertaken with the results showing that individuals’ access to financial services is limited to large companies and a limited number of individuals, and thus that there is a large untapped market.

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