ABSTRACT

This thesis proposes to develop a clear understanding of which financing tools are and can be used in order to enhance success in real estate development in Venezuela. In recent years, the country has witnessed a rise in inflation rates accompanied by high and volatile interest rates. These two factors have had a great impact on the economy but have especially made its mark on the housing market.

Through a macroeconomic study of Venezuela's situation and in particular the construction industry, we realize the importance in studying the relationship among financing and construction. By examining a variety of possible modifications of traditional mortgages to assess the effectiveness of alternative designs, which will lower current interest rates available to developers and make housing more affordable to buyers. The instruments involved in housing finance studied are: pre-sales, graduate payment mortgages, newly issued housing bonds which represent the introduction of a secondary market for real estate financing, and finally the effects of financing through dollar-based bonds. In this paper I explain how each of these tools are implemented by the construction industry and how they contribute to housing development.
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ACKNOWLEDGMENT

I am especially grateful to Professor Samii Massood for his interest, advice, and thoughtful suggestions all of which contributed greatly to the preparation of this paper. To Tara Zend for outstanding editing, to Venezuelan executives who were willing to be interviewed and provided relevant information to this analysis, and to everyone who supported and encouraged me in completing this thesis.

I would like to express my gratitude to Morris Harrar and Eduardo Darer for their companionship throughout my Master, and my very special appreciation to Cynthia Lavanchy for her kind cooperation and heartful support throughout this period.

Finally, I would like to thank my family for their love, support and encouragement which have made me who I am today. Hopefully, I will continue to share my accomplishments with them. Thank you all.
INTRODUCTION

This thesis analyzes the different financing mechanisms used in the Venezuela real estate market today, studies possible alternative solutions to lower interest rates available to developers and make housing more affordable to purchasers, to make construction more attractive to developers and less risky to lenders. Through a macroeconomic analysis of Venezuela and its construction industry this paper explores the importance of studying relationships between financing and construction, and among the buyers, developers, and the lending agents all of whom greatly affect one another. In seeking financing, the real estate industry's principal goals are:

- To create the highest property value.
- To provide the best market terms.
- To provide the greatest value to the buyer.
- To increase property market potential by expanding the marketplace.
- To lower developers risk, and enable them to raise funds at the lowest possible cost.

These ideas will be carried through this paper when analyzing the different financial tools. The structure of the thesis consists in a Preamble to Macroeconomics and Finances in Venezuela in the first chapter, followed by a study in the second chapter of the demographics and financing effects of this situation on the multifamily housing market. This analysis will help us to understand both, the market's specificity and its differences for each income group in Venezuela. Chapter 3, describes how real estate industry functions
in Venezuela, and analyze the impact of inflation and high interest rates on the construction industry. Chapters 5 through 7 explore in detail specific financial methods applied to the housing market, such as pre-sales (chapter 5) which is the method most often implemented by developers to finance high- and middle-income housing projects. Chapter 6 studies the graduated payment mortgage, a mechanism developed by savings and loans to help middle-income families buy houses in a hyper-inflationary economy.

Chapter 7 analyzes the first bond issuance in Venezuela which will provide developers with a more sophisticated mechanism to raise money, than pre-sales, construction loans or partnerships. And finally, this paper specially analyzes the possibility of real estate financed in dollars, and the risks involved. The methodology implemented for this study included in-depth interviews with financial investors, executive mortgage lenders, and developers in Venezuela.
MACROECONOMICS AND FINANCIAL
ENVIRONMENT OF VENEZUELA

The current macroeconomical environment in Venezuela evidences great uncertainty as to what direction it will take in the future. Although the situation has shown some signs of improvement, disequilibrium in the monetary and fiscal areas threaten the economic stability of the country. Three factors are critical to understanding the current economic disequilibrium confronting Venezuela: the seemingly irreducible path toward high levels of inflation which have already reached levels of close 40% in 1993, the continual tendency toward currency devaluation which is estimated this year at 33% (Bolivares vs. Dollars), and the strong pressure of high interest rates which have already risen to over 55% to prevent capital flight from the country. These factors directly influence the monetary and financial stability of the country in an adverse manner and limit the ability of national industries to function well. To understand more fully the current situation in Venezuela, it is useful to review briefly its past economic performance.

During the late 1980s, despite a major government deficit and strong negative interest rates, the economy of Venezuela, after many years of stagnancy and recession, again began to grow. Still, the deficit in the public sector came to 10% of the gross national product in 1989. This means that the
The government spent in excess of its earnings an equivalent of one-tenth of the total output created by the Venezuelan economy.

Because of the public expenditures and lack of monetary policies, the economy grew and demand expanded. This demand increased imports, and the need for foreign currency which, without generating new exports, was taken from The Foreign Exchange Reserves of Venezuela. Therefore, the economic growth, based on intensive government spending, resulted in currency devaluation and deterioration in the foreign reserves of Venezuela. Ultimately, these factors produced limitations on national production because of foreign exchange constraints. This combination of expanded demand and limited production, resulted in very high levels of inflation, to approximately 80% annually during the late 1980s. Growth produced in such manner was untenable because there were not enough national reserves to sustain it for a prolonged period of time. Rather, this growth had to be adjusted by a macro-economic program.

In 1989, a program for economic adjustment was introduced aimed at controlling inflation and liberalizing the economy. But its implementation generated a major recession and economical contraction. This program focused initially on reducing the fiscal deficit, deregulating prices, currency exchange and interest rates. The principal elements of this economic reform included establishing a unified, market-determined exchange rate, privatization of many public industries, and significant liberalization of international trade by reductions of import tariffs and trade controls. There

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1Such a program was implemented by Alan Garzia in Peru and is credited with producing the collapse of its economy and, among other things, the Fujimori phenomenon.
seemed to be no way to try to achieve a healthy economy, without incurring a strong recession. This recession was followed by strong inflation, caused by devaluation and the release of many prices which had been frozen for years.

The tough fiscal and monetary policy managed to stabilize the economy by lowering the inflation rate and reducing public expenditures, but brought with it very high interest rates and lower exchange rates that still have not been controlled. The decline in Venezuelan oil revenues as a result of a fall in oil prices in 1980s, put further pressure on the Venezuelan's exchange rate.

There were a number of other factors besides the government deficit which contributed to inflation pressure of costs as: a) sectional labor activists who demand accelerated salary and wage growth, and this influence industry costs and price increases. b) higher production costs, especially in those industries dependent upon importing raw materials. c) tax increases, generally used to finance public expenditures, and establish rent transfers to families and businesses that comprise the public sector. To alleviate these fiscal acts, labor resorts to demanding better wages and businesses demand higher prices. d) while increases in interest rates led to cooling of the economy, it brought higher costs that, in turn, were transferred to the consumer via higher consumer prices.

The reforms adopted in 1989 reduced major macroeconomic imbalances in less than a year. However, because of this shock treatment in 1989 the GNP declined by 8.6 percent (Graph 2.), the bolivar was devaluated from a 1988 nominal average rate of 14.5 bolivares per dollar to 34.7 in 1989 (see Graph 3), and there were significant increases in the price of raw
materials and inflation reached 85%. But, the economy recovered in 1990. Petroleum which is the cornerstone of the Venezuelan economy, showed unexpected growth from oil earnings in the last quarter of 1990 and the first quarter of 1991. The increase in oil revenues was due to The Persian Gulf War which raised oil prices sharply but temporarily. In 1990, oil sales accounted for 13,780 million US$. GDP grew 5.3 percent in 1990 and the rate of inflation drooped to 37%. The economic recovery continued in 1991 and 1992. GDP grew 9.2% and 7.2% respectively, and inflation declined to 31% for both years.

According to a report published by the Banco Central de Venezuela, the GNP decreased 2.3% during the first half of 1993 due to reduction in internal demand caused partly by contraction in public expenses. This year inflation is estimated to be 40% to 50%. (see Graph 2.) This rate of inflation is generated by an excessive increase in the volume of money compared with a marginal increase in the quantity of goods and services provided, and has generated a deep deterioration in the value of the Bolivar. The Central Bank of Venezuela must pay interest rates of over 55% to prevent capital flight from the country.
INFLATION

Graph 1. (Banco Central de Venezuela)

GROSS NATIONAL PRODUCT (GNP) Yearly Variations

Graph 2. (Banco Central de Venezuela)
After March 1989, an Exchange Agreement \(^2\) established a free foreign exchange market with a single, free-floating exchange rate for all currency operations. Only the state oil company and the Venezuelan Investment Fund must still sell foreign currency earnings to the Central Bank of Venezuela.

Despite lower oil prices and higher-than-expected inflation, the bolivar has depreciated at about 30% per annum to the dollar for the last two years, which shows a proportional increase compared to 20% devaluation rate as over previous years. The Bolivar loses approximate 15 cents daily with the American dollar responding to a policy of mini-devaluation's by the Central Bank of Venezuela which is trying to maintain a stable rhythm to this depreciation as means to avoid sudden devaluation's, ease commercial planning and increase foreign investments in the country. (see Graph 3.) Notwithstanding, there is a constant fear of a massive drop in the exchange rate of the bolivar, or the creation of new exchange control policies.

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\(^2\) Exchange Agreement No.1. IL&T Venezuela. 1992
An evolution in interest rates moved them to real levels of active\textsuperscript{3} rates of 20 to 30 interest points and passive\textsuperscript{4} rates of 10 to 20 interest points over inflation. (see Graph 4.) The Central Bank of Venezuela had to pay high interest rates to maintain these resources so that they would not be invested outside the country. However, this structure of rates, shows a transfer of wealth from debtors to creditors who are obtaining real positive earnings from positive interest rates.

\textsuperscript{3}We understand as active interest rates for those rates which will have to be paid by a borrower when asking for mortgage at financial institutions.

\textsuperscript{4}we understand as passive interest rates for those paid as interest for deposits by financial institutions.
As indicated in Graph 5, the differential between passive rates in Venezuela and the United States is approximately 50%, and it is oriented toward the compensation of the increment in the risk premium associated with possessing Bolivares instead of dollars. The risk of maintaining an investment in Bolivares related to dollars can be appreciated by observing the fluctuations of the yield for Venezuela CD's as a dollar-based investment. This affects all other investment with higher risks which will have to pay higher premiums to compensate risks involved.
Graph 5. (Banco central de Venezuela)

Short-Term Passive Interest Rates Vzla-USA (90 days)

Graph 6. (Banco Central de Venezuela)

Yield in Bs. vs U.S.$

- % Pasive rate Bs.
- % of equivalent yield in U.S.$
Other economic indicators which shows the effects suffered by the Venezuelans by the current situation are: Decreased purchasing power and a sharp drop in real salaries, (see Graph 7.) which shows the impoverishment suffered by Venezuela's population; and high unemployment rates. (see Graph 8.) Unemployment which had increased from 7.1% in 1988 to 8.7% in 1989, and peaked at 10.9% in 1990, since then it has been decreasing to a level of 7.4% in 1993.
Nevertheless, inflationary tendencies are present in most developing countries, (see Graph 9.) Venezuela is no exception or particular case. Furthermore, we realize that in Latin America, countries like Uruguay, Peru, and Ecuador are experimenting higher inflation rates than Venezuela, with inflation rates in the range of 60% per annum, and also Brazil which experimented inflation rates over 1,200% in 1992.
The chronic inflation, combined with negative economic growth, has and will continue to be the biggest challenge to Venezuelan managers in the immediate future. In 1994, one estimate\(^5\) indicates that active interest rates will move in a range between 60 and 70%, and inflation will not be lower than 45%. It was further estimated that the exchange rate for December 1994 will be between 158 and 162 Bolivares to the dollar.

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\(^5\)by Juan Antonio Lovera, Vice-president, Manpa, November 1993.

21
Looking toward Venezuela’s future economic growth, much of what might happen will depend on the behavior of the oil market, on a genuine increase in public and private investments and capacity of exporting untraditional goods. All of this will, in turn, be determined by the level of political stability maintained in the county, and the restoration of administrative and judicial credibility.
The centralized perspective that for many decades characterized Venezuela's development, created territorial agglomerations that attracted the population to Caracas and concentrated production, political and administrative activities in it. "While there has been a strong tendency since 1960 for manufactures to locate along Caracas, the capital continues to accommodate a considerable proportion of Venezuela's economic activity. In 1985, 63% of commercial bank deposits were captured in the metropolitan area and, in 1986, 49% of industrial establishments were concentrated in the capital region. As a result, the urban area of Caracas has expanded rapidly."6

As in most developing cities in the world, in Caracas, those with lower incomes usually have little opportunity to purchase a house. The reason for this is that the housing projects in urban areas are primarily dedicated to those with mid- and high-income levels and those with lower incomes remain primarily in rural houses in non-controlled urban settlements without government authorization or minimum standards of living.

The Venezuelan population is predominantly young and basically urban (84% of the population lives in cities, of which more than 35% lives in

6Alan Gilbert. 1993. In Search of a Home
Caracas) and 43% live in structural poverty; this percentage is vastly increasing. In Venezuela 65% of the population lives in inadequate conditions, approximately one-half of these people do not live even under minimal housing standards. Monthly family income for 1992 shows that 71% of all Venezuelan families had an income lower than 30,000 Bolivares. The average urban monthly income was around 28,575 Bs/month, which was on average equal to approximately 409 US.$/month, at the rate of 70 Bolivares per dollar.  

These imbalances in concentration of population combined with low earnings create an enormous housing deficit in the capital region, that has begun to be addressed by the Housing Policy Law passed in 1989.

The Housing Policy Law (*Ley de Politica Habitacional*) was created to provide those with low-incomes with a mechanism which would enable them to purchase new houses by receiving a special mortgage at a very favorable interest rate of approximately 9%, compared to the actual rate, as of this writing of 60%. Also, the law provides developers with special credits as construction loans, also at an interest rate of 9% if the price of housing is fixed and set according to the law. Given the very high rates of inflation of 40%, this implies a negative interest rates of around 30% as subsidies to developers and home buyers. The cost of each unit cannot exceed the equivalent of 180 times the standard minimum-wage, any Developer who builds under this law by the set fix price, has the incentives of a

---

7 El sector Inmobiliario de la Decada de los 90, Camara Inmobiliaria de Venezuela.
8 Is important to notice that in Venezuela, no-one has built rental housing during the past twenty years. This is the result of a lack of incentives for the sector and of the fixed rent levels.
Government's credits at 9% interest rate for construction for a duration of no longer than three (3) years, after completion of construction, this loan automatically transforms into a mortgage to finance the home buyer at the same rate.

In order to raise funds to be provided by the law, it was set to dedicate 5% of the federal government's ordinary budget to housing, and made it obligatory for 3% of every worker's salary to be deposited in the mortgage bank system. This huge injection of funds was to be devoted to building more houses for lower-income groups and reduce the housing deficit existing in Venezuela by giving incentives to the private construction sector.

An analysis of price levels and the income of the population published by El Consejo Nacional de la Vivienda lead to the conclusion that today more than 60% of Venezuelan families do not have the possibility of owning a new home, even with the help of the housing law. In the same way, the resources of savings and loan institutions, do not show an effective response to the necessities of this market segment and, at the same time, the population is suffering from decreases in their purchasing power as a result of inflation.

The savings and loan entities also have rigidly established eligibility conditions for mortgages. For instance, S&L's require that the borrower have sustainable earnings in order to secure a loan. Those with lower incomes, therefore, are unable to get a loan, and with minimum existing income requirements for loans, there are not many who would visit a financial institution.
In the past three years, urban multifamily housing projects under construction in the capital area have become polarized into: luxury housing and housing supported by La Ley de Política Habitacional (LPH). This polarization has come about primarily for three reasons:

1. High cost of urban land in Caracas. This affects the sales price in two ways: incrementing the direct costs of the project, or increasing the initial investment on the developer's side.

2. Increase in the cost of financing. This affects long-term credit as well as short-term credit for the construction phase of the project. On the other hand, it increases the risk-free factor which the developer wants plus a premium, to realize higher returns comparable to the risk involved.

3. Increased construction costs because of inflation, which are translated into high sales price and reduction in the demand for housing. (These can easily be seen in Graph 10, page )

This thesis approaches the issues related to different financing tools by analyzing three different residential markets which have different necessities: Luxury housing market which represents approximately (5%) of the market. Low-income housing which the government subsidizes and now represents approximately 80% of the market. And, middle-income housing which can be defined as the segment of the market which is not government subsidy but does not have the resources to buy housing without financing (mainly
conformed by salary based professionals), this group is being adversely affected by high inflation, lack of resources, and lack of government support.

Concerning middle-income housing in Caracas, the future prospects are not very encouraging if we analyze the cost structuring of a multifamily project for the middle-class in Caracas. Given the economic conditions in 1992 of land, construction, and financing costs, one study\(^9\) reveals that the sales price can not be under 75,000 Bs/sqm. For apartments of 100 sqm. this represents a total cost of 7.5 millions. If we assume that the homeowner will finance 70% of the apartment with a mortgage term of ten years and interest rates of 30% (1992), the minimum monthly income of the potential buyer should be Bs. 415,000, an amount which exceed the income of most middle-class families. Average income of a middle-income family in 1992 was approximately 200,000 Bs/month, less than half of the required monthly income to buy a 100 sqm apartment in Caracas.

According to the study mentioned in the previous paragraph (shown as case 1, Table 1), if the apartments were to be constructed outside Caracas, in an area where land price per square meter is lower (for instance half, see Table 1, effect of land cost), the sales price could be reduced to 5.7 million and the minimum income of the probable buyer would be Bs. 315,000 per month. While this is still high, it represents a 25% price reduction when compared to similar construction in Caracas.

Table 1.

Analysis of different cost effects on middle-income housing construction

<table>
<thead>
<tr>
<th>Effect of Land Cost:</th>
<th>Concept</th>
<th>Case 1 (lower)</th>
<th>Case 1</th>
<th>Case 1 (higher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land (Bs.)</td>
<td>6,000</td>
<td>12,000</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>Interest rate</td>
<td>30%</td>
<td>30%</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Construction cost</td>
<td>24,000</td>
<td>24,000</td>
<td>24,000</td>
<td></td>
</tr>
<tr>
<td>Sales Price</td>
<td>57,000</td>
<td>75,000</td>
<td>95,000</td>
<td></td>
</tr>
<tr>
<td>Minimal income</td>
<td>315,000</td>
<td>415,000</td>
<td>525,000</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect of the Interest Rate:</th>
<th>Concept</th>
<th>Case 1 (lower)</th>
<th>Case 1</th>
<th>Case 1 (higher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land (Bs.)</td>
<td>12,000</td>
<td>12,000</td>
<td>12,000</td>
<td></td>
</tr>
<tr>
<td>Interest rate</td>
<td>15%</td>
<td>20%</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Construction cost</td>
<td>24,000</td>
<td>24,000</td>
<td>24,000</td>
<td></td>
</tr>
<tr>
<td>Sales Price</td>
<td>60,000</td>
<td>65,000</td>
<td>75,000</td>
<td></td>
</tr>
<tr>
<td>Minimal income</td>
<td>200,000</td>
<td>265,000</td>
<td>415,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect of Construction Cost:</th>
<th>Concept</th>
<th>Case 1 (lower)</th>
<th>Case 1</th>
<th>Case 1 (higher)</th>
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<tr>
<td>Land (Bs.)</td>
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<td>12,000</td>
<td>12,000</td>
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</tr>
<tr>
<td>Interest rate</td>
<td>30%</td>
<td>30%</td>
<td>30%</td>
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</tr>
<tr>
<td>Construction cost</td>
<td>20,000</td>
<td>22,000</td>
<td>24,000</td>
<td></td>
</tr>
<tr>
<td>Sales Price</td>
<td>65,000</td>
<td>70,000</td>
<td>75,000</td>
<td></td>
</tr>
<tr>
<td>Minimal income</td>
<td>360,000</td>
<td>390,000</td>
<td>415,000</td>
<td></td>
</tr>
</tbody>
</table>

Now, if we analyze what would happen if the interest rates instead of being at 30% annually would be reduced to 20% for the same project in Caracas (see Table 1, effect of the interest rate), the final cost would be reduced to 6.5 million which is a 13% reduction in price but the individuals minimum income could only 265,000 Bs/month which is 40% less than in the first case. Looking at this changes in rates we realize that the middle-income family would need a subsidy of 15% to purchase housing in Caracas.

On the other, hand if the developer would reduce construction costs (see Table 1, effect on construction cost) by simplifying how the project is finished (lowering quality), the price of an apartment could be reduced to 7 million (7% less) and the minimum monthly income of the purchaser could be reduced to Bs. 390,000.

This leads to the conclusion among parameters which have caused the disappearance of middle-income housing developments, the one which has most influenced is the high cost of financing because of the effect that it has had on expected returns of developers and the incidence in cost of long-term financing. Second, everyday land is becoming more scare and its price is increasing, but this does not have as much effect as interest rates on the overall price of a project. Reduction in construction costs have not had as great an effect on the price of apartments. Nevertheless, the developer must be careful not to misjudge scheduling of the project because construction duration affects financial costs and, ultimately profitability. Given the high

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10The table analysed was published in 1992 when interest rates were at 30%, the effect of financing would be twice as important today with interest rates over 60%.
rates of inflation in Venezuela, a small delay in completion date could result in substantial additional cost.

In the following chapters, will try to analyze the different financing schemes used in Venezuela today, and the possibility of alternative approaches to lower interest rates for developers, to make housing more affordable from the point of view of the purchaser, and to make these projects more attractive to developers and less risky to lenders, are discussed.
STRUCTURE OF REAL ESTATE

INDUSTRY IN VENEZUELA

Today, the Real Estate activity in Venezuela is mostly developmental. In essence, it is the management and the combination of activities and functions, which seeks to; "Contribute to the economical and social development of the nation by the creation of the basic infrastructure needed for all the activities of the population".¹¹

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¹¹El sector Inmobiliario de la Decada de los 90, Camara Inmobiliaria de Venezuela.
In order to achieve this goal, the real estate activity is highly influenced by the knowledge of the market, and the constant definition of opportunities and necessities. Managing a whole range of activities as design, construction, promotion, financing and administration of projects oriented to the residential market as well as commercial, services, industrial, tourism and others. (see Graph 10.) Historically, its expansion permitted growth in the nation's employment, increase in economic activities, and over time the wealth of the country.

Today, real estate activity in Venezuela generates close to a quarter (25%) of the total salaries and earnings of the non-oil sector of the economy. In general, real estate provides more than 500,000 jobs which is 8.5% of the jobs available in the country, as compared to the agricultural sector (4.6%)\(^\text{12}\); further, it generates more than half of total industrial employment (15.8%). In 1991, real estate activity generated more than 456 thousand million bolivares, 88% of this was generated by construction and real estate sales while 12% was generated by other services. In the last two years, the real estate sector has been growing at a rate of 33.5% which is notably higher than the growth rate experienced in other industries at only 8.6%.

The production and marketing activities in the construction sector have the following particular characteristics:

- **High durability**, the decisions which influence over the real estate demand involve some long term income and expenses flows. There

\(^{12}\)Camara Inmobiliaria de Venezuela, 1992.
has to be a detail analysis about some determinants and strategic
decisions which play an important role, depending upon the different
income sector.

- **Long production cycle and turn-over**, which makes it highly
  sensitive to availability and financing costs. Because of the prolong
  period of the turn over of capital in the construction sector, not only
  time periods implied on construction, but also the market period of the
  product, makes financing a determinant variable for the economic
  feasibility of this activity.

- **It is a non transient good**, which means that limitation for disposability
  because of domestic supply cannot be resolved with imports which
  make supply of these goods less elastic, in comparison with import
  competing industries.

- **Incremental stock**, the total supply of housing, is made up of new
  constructions plus accumulated stock of existing housing, which
  generates in conjunction with the primary market, a secondary market
  of considerable magnitudes.

In relation with demand aspects, housing acquisition is influenced by
its double condition of having use for consumption which, it is therefore
driven by prices and by population income, and as an investment alternative
(real estate) it is driven by determinants of wealth, returns and future market
expectations. In the same manner, as the stock exchange and the currency
exchange market, the real estate market is typically a speculative market.
Being that housing it is a component of the alternative method of keeping wealth in inflationary economic environments, since in an inflationary period, generally real assets appreciate in value faster than the interest rates. This is why, determinants of housing demand should consist of not only the traditional variables of consumption, but also on elements of expected return from other alternative investments.

The biggest problem confronted in reactivating the Venezuela's construction sector; is the inflationary environment which has extensively increased costs, eroded purchasing power of the population and, discouraged investment. The accumulated inflation for the years 1988 to 1991 was approximately 189% and has continued to increase in double digits in the past year. The increase in the price of raw materials for construction for the same period was 172%. Even though, this seems beneficial for the industry because it is lower than general inflation, the rate nevertheless is prohibitally high. Other non-financing costs which involve labor, land and construction equipment which have increased at a higher pace, in addition, with a considerable increasing of financing costs for short-term mortgages has taken the inflation in the properties and housing prices to levels some times higher than general inflation. (see Graph 12) At the same time, family income decreased close to 55%, (see Graph 11) and the tendency of increasing interest rates of long-term mortgages for home acquisitions, have affected the purchase capacity of the population. In consequence, the combination of these factors significantly lowered the demand for low-income housing and the real estate market, and added to the housing deficit in the country.
The attractiveness of the construction business in Venezuela and revenues in the housing market depend on the market segment, defined by quality and the price of the product being offered. In the case of luxury housing, quality and location are priority factors, it does not rely on massive production but does require sufficient profit margins in order to be an attractive investment. Further, this segment has the capability to buy cash-down, and does not rely on financing or government subsidy. However it represents only 5% of the total housing market.

On the other hand, housing construction for lower income sectors, requires investment oriented towards production. The greater percentage of this segment is government subsidies by La Ley Política Habitacional, which sets the maximum housing price to be build under the law’s assistance. The attractiveness of this market for investment relies on the differential in

Graph 11. (Camara de la Construccion de Venezuela)
interest rates received by the developer through a mortgage of the housing law, in comparison to nominal interest rates offered in the market. However, the demand for this type of housing depends on the availability of credits offered by the government, which actually determinate the total housing to be developed. Economies of scale are taken advantage of in order to attend to significant volumes of demand with possibilities for the industrialization of parts for housing, to optimize the investment, and to achieve reduction in costs without lowering the quality and benefits of future households.

The extent to which inflation is adversely affecting the construction in Venezuela can be seen in an article published by the daily newspaper "El Universal" on October 31, 1993.

"There is an air of uncertainty regarding the direction that construction in Venezuela is going to take because of crippling inflation, high interest rates, the fiscal deficit and unrestricted conditions that govern public work contracts. That explains why construction companies see their profit margins shrinking at the same time that there is an inevitable loss of capital resulting in higher costs.

Demand in the industry has been seriously neglected; important works of infrastructure, services, city planning and housing are pending, and they require proper technical and economic planning in order to be completed. What’s missing is adequate funding, coming as much from the public sector as the private.

According to the ex-president of the CVC, at the close of 1993 the economic crisis confronting the country will translate into growth in the GNP of no more than 1%, an inflation rate of more than 40%, a fiscal deficit of approximately 250,000 million bolivares, a 35% devaluation of the bolivar and lastly, a depressed price for our principal export product: petroleum. 13


36
Graph 12.

Inflation in Population Vs. Inflation in Construction

Graph 13.

Private Investment in Construction
After looking at all these facts, we come to realize that financing terms and interest rates can make or break a development project. Some terms and rates are fine-tuned to insure the success of a project, while others are harsh enough to ruin an otherwise promising project. The crucial differences in terms and rates stem from the ability of the developer to apply up-to-date innovative and creative financing techniques to the project. While this is true for any construction, it is particularly important for Venezuela because of its current situation. It seems that for the near future the low interest, fixed rate, long-term mortgage are almost gone. A number of new more complex financing plans have arisen in its place. The number and types of financing plans available now is large and is limited only by the imagination of the lenders and borrowers and a country's legislation. Some typical examples of current financing plans implemented in Venezuela are presented in the following sections.
PRE-SALES

In analyzing the situation that Venezuela is confronting and the economic factors driving the development of the housing market, this study found developers are looking for new and creative financing tools that provide them with capital at lower interest rates than current active rates and, at the same time, increases their ability to sell their finished project profitably. For the last five years, pre-sales has been the method most implemented by developers when seeking external financing for luxury and middle-class housing. By analyzing the total pre-sales market in Caracas, we find that 75 residential projects located in 10 of the best neighborhoods comprise 65.3% of the total pre-sale projects and 56.6% of the total area offered for pre-sale.

In 1993, rising interest rates in the financial market substantially increased the benefits derived from using pre-sales as a financial instrument for developers. Because the pre-sales market became very large and developed such a stable volume of offers which tended to appreciate, people began to view pre-sales as an investment vehicle.

In a market driven by other factors than demand, pre-sales not only minimize the risks of developers by giving them the financial leverage of having funds at no cost, but also progressively insure their ability to sell property in a market under conditions more advantageous than the ones implied through a cash transaction. If developers cannot sell their projects when completed, the interest rate paid on financing will substantially
decrease calculated returns. Currency devaluation and prolongation of the period before a return is realized on an investment are major risks taken by developers. This has made pre-sales, over time, a more important aspect of real estate activity and, from the developers vantage, eliminated the need for any other type of financing.

In December 1992, it was estimated that 1993 pre-sales would account for close to 120,000 sqm.\textsuperscript{14} By April 1993 this estimate was changed to 200,000 sqm. (see Graph 14) and it was estimated that the total area offered would be absorbed by the market within a few months. More over these estimates are based on pre-sales offered in the market plus projects under design face.

Graph 14. (Camara Inmobiliaria de Venezuela).

\begin{figure}
\centering
\includegraphics[width=\textwidth]{graph14}
\caption{Pre-sales Total Area for 1993 Apartments in Caracas}
\end{figure}

\textsuperscript{14}AKROS Organization. 1993.
In the pre-sales market, appreciation is attributable to a number of factors. One, the ability to maintain an attractive market price positively influences acquisition of property, since the price can be contracted at a favorable rate and fixed at the time of purchase. Payments to the builder can be made over time during the construction period, according to the speed and progress of the construction.

Nevertheless, the purchase price of the property is still directly related to interest rates. The interest rates to be paid can be included in the amount of the fractional payments that the buyer has to make by increasing payment according to interest owed and calculated from the non-paid part of the fixed price. This method gives the buyer the opportunity to pay accordingly to its benefit under certain parameters, but he will have to paid passive interest rates to developers. Another method often employed is an agreement upon a fixed price which includes the implicit cost of the interest rate in the price and a pre-arrangement for fixed-time payments. Projects driven by low demand and mostly oriented toward the middle-class market use pre-sales agreements containing stipulations regarding only inflation, which means they set the price to be paid during the construction period. Different payments are indexed according to the inflation registered for the specific period from date of purchase (this method usually requires quarterly based payments). As a result, in theory, the price is fixed as a cash operation and based on current market conditions, but the buyer assumes all risk resulting from inflation during the construction period.

Rise of interest rates implies an increase in price in the pre-sale operation. Although this system continues to be clearly more advantageous for the buyer when the property appreciates at a higher rate than actual
interest paid, the pre-sale system is also advantageous because the interest rate paid is lower than the interest rates the buyer would pay for a mortgage loan, or other alternative financing. Also, the transaction will be advantageous for the buyer in proportion to any increase in the price of the property that exceeds present value of the return on alternative investments.

The evolution of prices in the pre-sales market does not only depend on the above-mentioned factors. Rather, behavior of supply and demand in the market is another factor that drives the range of the final property price. In the same way, family income and expectation of inflation-driven market appreciation, highly influences price levels.

On the other hand, the financial needs of the developer are important factors which influence pre-sales prices, and determine whether the transaction will be attractive to the buyer. Another factor which should be taken into consideration in the reevaluation of the investment is the actual advancement in the construction of the project. As the project comes to completion the risk (delays and quality of construction) for the buyer decreases and the financial needs of the developer decreases, therefore the prices increase.

Looking at the movements in Venezuela's pre-sales market between January and April 1993 the increment in price fluctuations were: 31% of real estate projects showed a price increase of up to 10%; 33% had an increase of between 11.0% to 20%; 19% of the projects increased between 21% and 30%; and the other 17% suffered increases of over 30%. (see Graph 15.)

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important to note that a 10% increase in rates during the period from January to April equals an annual average of 33%. In this sense, and taking into consideration the accumulated inflation rates of 11% during these four months, the properties which suffered an appreciation in price in excess of 11% (69% of the properties) benefited the buyers. Similar analysis can be done by comparing the increase in price levels of pre-sales with currency exchange depreciation; during this time period, the exchange rate (Bs./$) incremented by 12%. This shows the advantage of investing in real estate in Venezuela, or the benefit of buying on pre-sales market than investing in dollars and then purchasing an apartment cash-down.

Graph 15. (Organizacion AKROS, 1993)
Comparison of price adjustments in the pre-sales market also appears to be favorable when compared with the registered levels of passive rates (as a risk-free alternative). During the first quarter of 1993, these rates fluctuated between 45% and 47% on an annual basis, or almost 14% per quarter. In this sense, projects that registered a price increase equivalent or higher than 14% for this period resulted in a favorable difference in pre-sales operations versus investing in CD's.

Nevertheless, it is important to note that what seems favorable to home buyers, may not be as favorable to developers when comparing appreciation in property prices with current interest rates for construction funding. If developers would like to take advantage of appreciation in property prices, they could intermittently sell a specified number of units incrementally at the pace of construction to cover costs. This is beneficial for developers because, in conjunction with non financing through financial entities the developer assures the selling of the property, and seeks appreciation in the price through holding the property for longer periods of time in order to increase returns.

Finally, the tendency toward increasing prices in the pre-sales apartment market reflects the cost pressures and demands of prices today in Venezuela and those expected in the future market. Given these considerations, the relationship of pre-sales prices and the dynamics of a cash-down market is extremely narrow. Nevertheless, the increasing prices in the pre-sales market speculates this presumption, which finally is the "bet" posted by developers in the Venezuelan market.
GRADUATED PAYMENT MORTGAGE

After experiencing a considerable increase in interest rates in 1989, long-term mortgage lending was seriously affected because monthly amortization payments of credit resulting from higher interest rates made it impossible for most to finance new housing. These high interest rates overwhelmed the salary of many middle income families, which is the market targeted for this type of financing because they do not have enough resources to make use of a pre-sales format. If the financial system had not been changed, middle-income families would not have been able to own a home.

To help middle-class borrowers qualify for a home loan that they otherwise would not be able to afford, the Savings & Loans developed a mechanism to restructure the mortgage payment schedule by beginning with low payments which increased over time. This mechanism allowed banks to adjust monthly interest payments according to the borrower's individual salary, and enabled an average families to borrow a sufficient amount of money to pre-own a home with the philosophy of buy today and pay tomorrow.

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16 This mechanism is based on the mortgage lending system used in Mexico in the last years, also implemented in the U.S. in the early 80s during high inflation but the payment levels where graduating according to inflation instead of salary increase. (Modigliany and lessard, 1975, New Mortgage Design for Stable Housing in an Inflationary Environment. Further discused in interviews.)
Monthly graduated mortgage payments vary from year to year. Based on the fact that in Venezuela salaries do not grow at the same pace as inflation, monthly payments will not exceed 30% of the family’s monthly income. More over, the mortgage is molded in such a way so that should there be a change in interest rates, the effect on the payment would hardly be felt by the borrower. Specifically, the effect of inflation on the change in interest rates is slowly absorbed by the monthly payments, allowing for slow adjustment of rates by the lender according to changing conditions.

An example of this approach is: if a borrower has monthly payments of 100,000 Bs, the bank will give the borrower a discount and, therefore, the borrower will only pay 50,000 Bs. monthly. This means that the bank is really giving two loans, one for capital and the other on interest not paid. After 12 monthly payments, the borrower will again have to make one lump sum payment equal to 4 monthly payments. In the second year, the borrower will pay 80,000 Bs. Instead of growing with inflation, the monthly payments will grow with salary, but because of high interest rates the borrower will try to pay as much as possible in a shorter period of time.17

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17 Interview, Marketing Director, Banco Mercantil, Venezuela 1993.
The graduated payment mortgage (GPM) with its rising schedule of payments is viewed as appropriate only for young families with expectations of wage growth substantially in excess of the rate of inflation. As seen in graph 16, the borrower would need to have sustainable earnings for a prolonged period of time in order to repay the mortgage loan. Some of the shortcomings of this mechanism are that if the borrower's salary should grow at a pace slower than inflation and interest rates, the principal of the loan will increase for several years, although the rising payments would eventually exceed the interest charges and the borrower would supposedly fully amortize the principal by the end of the contracted period. If growth of salary in contrast to inflation is too low, a middle-class borrower could be converted into a debtor forever. Such a person could confront virtually an everlasting debt, subject to eventual interest rates.
In contrast, by pre-buying the property, the borrower is protected from upwardly spiraling inflation and increasing prices. Still, this system does not protect the borrower from high interest rates; rather it, merely minimizes its impact in the immediate future.

One feasible modification of this type of mortgage might be to finance the pre-sale operation through shared payments. For example: for a 10,000,000 Bs. apartment, the client is expected to pay 2,000,000 initially and thereafter make quarterly payments of 1,000,000 Bs. In this case, the bank could finance a percentage of the purchase through a special loan agreement, in which the bank will provide funds to the buyer according to the payments that the buyer will make to the developer.

The interest rate for this kind of mortgage would be the actual active rates and it would have the same type of payment agreement as a graduated payment mortgage. If we analyze this seemingly simple idea more fully, it becomes apparent that the buyer would be able to save the differential between active and passive interest rates, for the price percentage paid by him, and also will save because the buyer will be able to borrow as needed for the payments. As previously stated, payments to the bank would be the same as those used by the graduated mortgage method but the timing of the lending period would be different and the payments would be lower. On the other hand, payments to the developer would increase after the price is agreed upon only at the rate of inflation. As a result the buyer is partly protected against inflation by using the pre-sales system, but also has lowered exposure

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18 Interview, Marketing Director, Banco Mercantil, Venezuela, 1993.
19 Refers to pre-sales agreement conditions.
to high interest rates through a package combining loans with developers and lending institutions. The buyer then co-finances the purchase with the developer during the construction period at the lowest market interest rate available, and finances these payments to the developer through this new type of mortgage package by signing an agreement of progressive lending. The problem with this financing mechanism is that the buyer needs to have enough money to cover his percentage of the pre-sales agreement and the monthly mortgage payment.

The Graduated Payment Mortgage is a clever financial tool created by savings and loans institutions to enter the real estate market, this method seems to be the only feasible path to fulfill the needs of middle-income families to purchase property by paying low initial installments, while at the same time the financial institutions are taken advantage of charging the high interest rates currently offered in the market. This new system has helped reactivate the middle-income housing sector of the construction industry. For the industry it is vital that the middle class be able to have access to a mortgage lending system. Today, the majority of sales in real estate are paid by either cash-in-full or pre-sales. As a result, this method of lending has increased sales and expanded the market.
"Casarapa"

The first housing bond
issued in Venezuela

This chapter analyzes the first bond issued in Venezuela which relied upon real estate to act as an asset, in addition to interest paid to the bondholders. It is important to note that this is the first case of such an issuance. Normally, a bond that had used property as collateral would, on its expiration date, function like any other fixed income instrument.²⁰

Promotora Casarapa C.A. was founded in September 1991 with the objective of the development of the Urbanizacion Ciudad Casarapa that constitutes 110.65 hectares for a housing project which would allow for five thousand (5,000) homes for low- and middle-income families. Each apartment, which would be approximately seventy three square meters, constitutes a portion of Ley de Politica Habitacional (LPH) market. The project will comprise construction of 304,610 square meters of urban infrastructure and will include educational, recreational and medical service areas, which will total an approximate investment of seven thousand million Bolivares (7,000,000,000.00 Bs.).

Incentives for Being a Low-income Housing Project:

Previously Promotora Casarapa had issued a long-term financing based on a mortgage given by Instituto Nacional de la Vivienda (INAVI), on October 18, 1991. This mortgage consisted of 85% of the purchase of 110.65 hectares of land which implied 137,286,900 Bolivares. The interest paid for this mortgage was fixed at 12% annually based on the total cost of land which represented 161,514,000 Bolivares. The mortgage was to be paid as homes were sold within a five-year maximum time period. This financing used the land as collateral. But INAVI committed itself to resigning from the first degree collateral to the bondholders which would have been used to finance the housing construction.

Urbanizacion Ciudad Casarapa is a multifamily housing project built for low- and middle-income families covered by La Ley Politica Habitacional; which means that the cost of each unit cannot exceed the equivalent of 180 times the standard minimum-wage. The present minimum salary in Venezuela is Bs. 9,000 which means that the maximum housing price would be Bs. 1,620,000.00. Any Developer who builds under this law has the following incentives: Government's credit at 7% (specifically this project) interest rate for construction through Saving & Loan Entities for a duration of no longer than three (3) years. Also, this loan automatically transforms into a mortgage to finance the home buyer at the same rate. The effect of these incentives on the economic result of the projects are critical in determining the benefits for the company and its project. Not only because it guarantees the market for the project by giving the home-buyer a long-term mortgage at preferential interest rates, but also because it provides the builder with a
credit cost of 7% interest rate during construction lowering the financial cost of the execution of the project. 21

the Beginnings of Housing Bonds:

Basically, the idea of issuing housing bonds resulted from bureaucratic inefficiencies in implementing the Housing Policy (LPH) for projects of this size. For instance, if the promoter has the capacity to produce 800 homes per year, he would require a credit of approximately eight hundred million bolivares a year through the housing law. Taking into consideration the existing housing law, the government is able to collect 8 to 10 thousand million bolivares per year, this would require the government to give Promotora Casarapa 10% of all resources it collected each year, which is impossible. Another reason for this issuance was to increase the project's market potential by giving a reasonable solution to purchase a house for people who could not receive a loan under La Ley de Politica Habitacional. After reviewing other financial schemes available, Promotora Casarapa realized the necessity to develop new financial techniques to guaranty their project's success.

In the beginning, the idea was that the housing bonds would be exchangeable for an apartment at the end of the holding period without any additional interest payments, but this would not have been an appealing instrument for the investors. According to this new design, the bonds are

21 Refers to chapter 2, Ley de Politica Habitacional.
instruments that can be sold through the Caracas stock exchange and thus, they represent a major advantage for the investor and substantially differentiate this instrument from a pre-sale contract which generally is non-transferable. The main characteristics of housing bonds are their obligation to the bearer with a mortgage guarantee. The price of each bond is one million six hundred and twenty thousand bolivares. What is interesting about using this instrument is that each bond corresponds to one house, therefore, at the end of the term, after a maximum of two years, the bondholder may exchange the bond for a Ciudad Casarapa apartment. Whoever buys a bond is not only guaranteed for a set price, but also will receive interest.

**Characteristics of the Housing Bonds:**

The bonds were issued in Caracas on July 20, 1993. The interest on them will be paid quarterly with variable interest rates set each quarter; the bonds will expire 24 months after issuance. The nominal value of each bond is 1,620,000 Bolivares, there are 154 bonds giving a total nominal value to this issuance of Bs. 249,480,000. The issuance of the bonds is guaranteed by Promotora Casarapa, C.A. with part of the land estimated at approximately Bs. 374,220,000 with an area of 1,106,500 sqm. as collateral. The land plus the infrastructure and all additional building construction on the site remains under the name of all the bondholders. Should there be a failure or set back in the mortgaging, a common representative will oversee completion of the project. Should the developer fail to pay interest on the bonds upon
maturity or make any modification to the project, the bondholder has the right to call an assembly to redress the situation. In other words, the risks faced by the investor in using this type of financial instrument poses no problem than that confronted by any other commercial operation, i.e. failure.

For this issuance, the interest rates vary and are to be paid quarterly. The interest rate shall be revised each quarter and will equal an arithmetical average for the previous four weeks of the posted date which will consist of 80% (eighty percent) of the average rate paid for 90 day CDs by six of the main commercial banks in Venezuela. The bonds shall be paid in full by the end of the two year period by giving the bondholder two options:

A. The bondholder will receive the nominal value of the bond plus 10.5% of its nominal value.

B. The bondholder will receive in return for the bond an apartment with an area of approximately 73 square meters. The apartment shall consist of three bedrooms, 2 bathrooms, a kitchen and a laundry. The act of buying the apartment will be completed at a price of one million six hundred and twenty thousand bolivares. (Bs. 1,620,000)

In the case that the developer would not be able to exchange the property, it would correspond to cancellation of the obligation to a bondholder who selected option B. Then, the bondholder will have the option to extend the period of the bond for two more quarters with an interest rate equal to 95% of the average rate paid for 90 day CD's, by the six main commercial banks in Venezuela. Once this period is terminated, if the issuer
still finds himself incapable of giving the real estate property to the bondholder, he will be obligated to pay the nominal value of the bond, plus a prime of 30% of the nominal value of it.\textsuperscript{22}

\textbf{Distribution of Funds Raised from Bond Sales:}

The funds from this issuance were used to finance the construction of 154 housing units, which compressed the first stage of the Urbanizacion \textit{Ciudad Casarapa} project. The funds were distributed in the following:

- earth movement \textsuperscript{Bs.} 40,000,000.00
- road service \textsuperscript{Bs.} 30,000,000.00
- sewer system \textsuperscript{Bs.} 20,000,000.00
- drainage system \textsuperscript{Bs.} 20,000,000.00
- lighting \textsuperscript{Bs.} 30,000,000.00
- building construction \textsuperscript{Bs.} 109,480,000.00

\textbf{Total} \textsuperscript{Bs.} 249,480,000.00

\textsuperscript{22} Interview, President, Promotora Casarapa C.A., Venezuela, 1993.
Advantages to Bondholders:

First, bondholders are assured of liquidity because it is an instrument trade on the Caracas stock exchange which could be sold at any time and at a higher price. It also provides more security and transparency as a publicly held operation, than a standard pre-sale contract. The developer, through this type of issuance offers a collateral and resource management which is supervised by different Government official agencies.

The second advantage, derives from combining the returns of a real estate investment with the returns of a financial investment. According to calculations, if the Venezuela's minimum wage increases to 50 thousand bolivares in two years, the value of the homes will be 2 million 7 thousand bolivares at the end of the two-year term. This will mean 66% in additional earnings on the selling price. According to this, the benefit of buying the bond lies in the possibility of purchasing the home at the current fixed-price. If the buyer can afford to do so. This investment will produce a return of approximately 66% based only on its revaluation as a real estate asset. In addition, the bond will have quarterly installments based on 80% of the passive rate for 90-day deposits paid by the six main Venezuelan banks for the same period. By investing in this manner, the buyer has secured a large portion of passive-market interest rates, and has purchased a house at current LPH price, whereas future price fluctuations would depend on nationally set standard minimum-wage.
Targeted Clients for the Housing Bond:

The bonds were issued with the idea that they would be acquired by individual investors interested in buying a home. Another type of client could be one interested in investing for returns. However, when issued, Promotora Casarapa found that potential homeowners required additional financing in order to be able to purchase a home. This was not their objective. Therefore, they tried to effect a solution in conjunction with Sociedad Financiera Principal in an effort to improve their offer of apartments at a fixed price with fixed interest rates of 20% including a guaranteed housing bond.

Nevertheless, the bond was directed toward the commercial banks and loan institutions as well as any other company which had a housing program for its employees. A good example is the Banco Principal which is utilizing this bond to offer its personnel a housing program at a rate of 20% annually; but, the bank profits from the subsidiary cost of the bond's interest. This is profitable for Banco Principal because it obtains a profit of 48% (at today's rate) from the property's title, in addition to the 20% paid by its employees. Therefore, the company is able to help its personnel own homes at an affordable rate, while it still receives market rates for its loans. The actual distribution of homeowners in Urbanizacion Casarapa is shown in Graph 17.
Advantages and Disadvantages to Developers:

From the developer's perspective this type of bond issuance has, as one of its advantages as long as it is in the hands of the final buyers, the fact that bonds can be converted into sales instruments and expand the commercial network which indirectly acts as sales representatives of the developers firm. If the bondholders will be the future homeowner, this implies that the transaction was completed on a cash-down basis. This obviates the need to obtain credits set by the Housing law, which today is extremely difficult and cumbersome.
Another important advantage of this new bond instrument is that developers will also maintain independence, management, and administrative control which would be difficult to preserve if they were to rely on bank financing. The developers also have the guarantee and disposability of these resources whenever needed, independent of eventual fluctuations of bank liquidity because of changes in interest rates.

On the other hand, developers take the risk of freezing the prices of the apartments and of finding themselves with units sold two years prior, which have re-appreciated more than originally expected. Another disadvantage is due to the inflation risk that could exceed the estimated revenues, if they were not covered by the financial differential of the operation. Today's cost of one apartment to the public is 1,620,000 Bs. and today's cost for Promotora Casarapa is approximately 1,450,000 Bs. Previous experience indicate that, at the end of next year when the units are finished, house construction costs will probably appreciate to 1,620,000 Bs. When we realize this effect of inflation on real cost, then earnings must come from how the funds has been utilized during the two-year construction time period (future value of money). Thus, real earnings come from the differential of raising money at 80% of passive bank rates, which is approximately 48% at today's rate. Also, if we take into consideration that active rates are, on average at 70%, that developer can obtained additional benefit by investing these resources at market rates. This additional income should compensate for the cost increases caused by inflation and suffered by the developer during the construction period against current sales prices at which the bonds were issued.
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<td>16,646,077</td>
<td>8,540,582</td>
</tr>
</tbody>
</table>

* This cash flow analyzes was realized based on data from Promotora Casarapa on Feb 1993. Passive interest rates were calculated at 50% and active rates at 60%.
In the projected cash flow for Urbanizacion Casarapa (Table 2.), we can foresee that the total income increase at the beginning of each transaction (as housing bonds, pre-sales or loans by LPH) and decreases over time when the money is utilized for construction. The Additional Income for Investments row shows the magnitude of the earnings calculated by the developer from investing the capital raised at the interest rates offered in the market. From this we can conclude that, in today's market, low-income housing is a business more directed toward financial investment and money handling rather than merely construction.

Total Financial Cost for Urbanizacion Casarapa:

In analyzing the total financial cost of Casarapa, we can see that the average interest rate paid by Promotora Casarapa C.A. is very low, at only 30% of the active rates offered in Venezuela (under the condition of a fixed price given by the Ley de Politica Habitacional). The total money in loans in a mortgage basket, consists of 400,000,000 Bs. at 7% by LPH; 300,000,000 Bs. in pre-sales at zero-cost. This represents approximately 65% of the mortgage basket at approximately 4% annually. The other two resources utilized by this developer are a commercial bank mortgage providing rotatory cash and bridge credits which, although in constant change, usually represent approximately 20% of the mortgage basket, of Bs. 100,000,000 at an actual rate of 70%, and 250,000,000 Bs of the sale of housing bonds at an actual rate of 48%. By combining this basket of loans, the financing cost calculated from the different financing schemes implemented by Promotora Casarapa results
in an annual average of 21.24%, compared to 70% active rates in the market, and to a 50% inflation rate, which means that Promotora Casarapa has subsided its project by more than 28% over inflation.

The short- and long-term potential growth of implementing this mechanism depends on how this negotiation is received by the public and the market. Thus it is a test case, providing new alternative to financing, and if it is successful and the public becomes familiar with this type of issuance and starts to purchase, it will be of great importance to developers since they will not be totally dependent upon financial institutions in the future. And, this will also be the beginning of a secondary market for real estate in Venezuela.
REAL ESTATE FINANCING
IN U.S. DOLLARS

This chapter discusses the creation of a mechanism which would allow developers to finance projects in Venezuela and pay interest in dollars rather than in bolivares at a higher rate. By doing so, this chapter raises key questions as to how developers in Venezuela are creating defensive-based economic approaches by offering financial tools which may seem to be more secure to investors. It is important to note that this instrument has never been used in Venezuela. Rather, the numbers estimated are market-based and derive from proposals discussed during interviews with developers and private investors. This particular analysis focuses on a middle-income family development project in Caracas. This project will include one hundred and forty apartments of approximately eighty-four square meters, comprised of a: living room, dining room, kitchen, three bedrooms, and two bathrooms.  

The instrument under discussion consists of a bond which will operate in a manner very similar to the housing bond issued by Promotora Casarapa (see Chapter 8). These bonds are instruments that can be sold through the Caracas stock exchange and thus represent a major advantage for the investor. Each bond corresponds to one apartment and the nominal value is equal to

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23Interview, Roberto La Rocca, Developer, Venezuela, 1993
Bs. 12,957,615. There are 140 bonds for a total issuance of 1,814,066,000 Bs.

To increase the appeal of this issuance, during the holding period, the bondholder will receive interest in US dollars because dollars are known to be a very strong and secure currency. At the end of the term, a maximum of 43 months, the bondholder may exchange the bond for an apartment. The land plus the infrastructure and all additional on-site building construction remains in the name of all bondholders. Should there be a failure in mortgaging, a common representative will oversee completion of the project. Should the developer fail to pay interest on the bonds upon maturity or make any modification to the project, the bondholder has the right to call an assembly to redress the situation.

For this issuance, the interest rates are fixed and are to be paid monthly. The interest rate will equal a fixed rate of US$ 10% annually, based on the nominal value of the bond in dollars at the exchange rate of the day in which the operation was executed. The bonds shall be paid in full by the end of the 43 month period by giving the bondholder, in return for the bond, an apartment in the project. This apartment could be kept by the bondholder or sold in a secondary market. It is important to note that each of these bonds is exchangeable for one apartment if annual inflation is no more than 35%. Any difference over this inflation rate will be paid by the bondholder at the end of the holding period. Whoever buys a bond is guaranteed a set price, which would change only if the inflation rate exceeds 35% per annum as estimated by the developer; in this case, the bondholder must compensate the developer for the difference over the nominal value of the bond.
From the Developers perspective:

The idea of this type of instrument is to expand the universe of possible investors by incrementing the market from 140 possible middle-income homeowners who would comprise the pre-sales market, to investors who are looking for instruments which will not fluctuate with currency devaluation. From the developer’s perspective this type of bond issuance has the advantage that it can be converted into sales instruments and expand the commercial network. Further, it provides the developer with the advantage of maintaining independent control of the project which would otherwise be difficult to preserve if he had to rely on bank financing.

This mechanism does not increase the developer’s risks because the bonds are guaranteed by the apartments which constitute the final payment. Also the developer is protected from inflation because the bondholder covers anything over the projected inflation. If the developer had instead, contracted to repay the bonds in dollars at the end of the operation, the risk would be tremendous because if there were a devaluation of the bolivar considerably higher than inflation and simultaneously appreciation of the property, the developer would not be able to repay the bonds with earnings from the selling of units.

By analyzing this type of financing in dollars at an annual interest rate of 10% also in dollars, and by calculating an annual inflation rate in Venezuela of 40%, we can conclude that the real cost of this financing mechanism is approximately 50% in bolivares for the developer. This
means that this mechanism not only enables the developer to sell the property, but also provides him with a differential in interest rates (active interest rates in Venezuela are currently at 70%), which could increase the projected return. In order to minimize the currency risk, the developer could hedge against the dollar, by making an investment, equivalent to the amount of the interest to be paid during the project to the bondholders, in dollars. The difference between the rate paid of 10% and the interest earned on this small amount e.g. 3% would imply a small loss as financing cost. Given this method, the developer achieves a hedge against the risks of currency exchange.

Estimating Dollar-Based Bond Prices:

An important aspect of these bonds for the developer is the price at which the bonds will be sold. The price of the apartments is calculated by the developer as if it were a pre-sales operation in which all the units will be sold within a ten-month period as follows: (see Table 3.) In the first month of pre-sales (July 1994) approximately 20% of the apartments would be sold at a price of 138,000 Bs/sqm. The next 7 months of sales would consist of groups, each representing 10% of the total complex and, finally, 5% of the units during each of the last two months. Because of inflation, for this calculation, monthly appreciation was estimated at 3% which is why the developer is covered for a yearly inflation rate of 35%. The projected payment plan for
the units is: a down-payment of 25%, monthly payments (during construction) which will total 60% of the price of the apartment and a final payment of the remaining 15% at turn-key. This analysis gives a total sales revenue of 1,814,066,000 Bs. which should equal the total value of the bonds issued.
Table 3.

Estimated Pre-sales program in ten months with monthly appreciation because inflation of approximately 3%

Prices in thousands of Bolivares

<table>
<thead>
<tr>
<th></th>
<th>9</th>
<th>10</th>
<th>11</th>
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<tbody>
<tr>
<td>Pre-sale 1/10</td>
<td>2,352</td>
<td>126</td>
<td>296,750</td>
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<tr>
<td>Pre-sale 2/10</td>
<td>1,176</td>
<td>130</td>
<td>152,830</td>
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<td></td>
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<td>134</td>
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<tr>
<td>Pre-sale 4/10</td>
<td>1,176</td>
<td>138</td>
<td>162,134</td>
<td>44,334</td>
<td>3,800</td>
<td>3,800</td>
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<tr>
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<td>156,419</td>
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<tr>
<td>Pre-sale 6/10</td>
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<tr>
<td>Pre-sale 7/10</td>
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<tr>
<td>Pre-sale 8/10</td>
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<td>Pre-sale 9/10</td>
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<td>158</td>
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Total pre-sales by period: 11,760, 140, 1,652,234

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<td>25,073</td>
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<td>27,398</td>
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<td>2003</td>
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<td>2,647</td>
<td>2,647</td>
<td>15,881</td>
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<td></td>
</tr>
</tbody>
</table>

Page 68
Bond Issuance's in Developing Countries:

Developing countries have a vital interest in international financial market developments and in the safety and soundness of the international financial system. These markets offer such countries the possibility of attracting the funds they need for their development. Two obstacles prevent fuller utilization of international financial markets by developing countries: creditworthiness and the standards of investor protection on domestic financial markets. Lack of creditworthiness impedes new financial flows. Re-establishment of creditworthiness is essential if the element of country risk is to be reduced to a minimum. If investors are going to channel funds through the equity markets of developing countries, they need assurance that these markets operates efficiently and transparently and that international standards of investor protection are met.

Increasing global competition in financial markets and worldwide capital mobility, suggest that developing countries will need to ensure that their policies foster an attractive financial environment for investors if they intend to tap these markets. Therefore, it is useful to analyze the interest rates which will be paid to investors so that they will be attracted to high-risk investments. Moreover, domestic investors are also affected by an increased global outlook and investment opportunities abroad. Since financial liberalization and technological development have made capital movements easier, including movements of funds out of developing countries, the need
to raise domestic financial market standards is increasingly important as a means of discouraging capital flight.\textsuperscript{24}

If on a risk adjusted basis, returns are higher domestically than elsewhere, the integration of domestic capital markets should attract capital from abroad. Indeed, the global outlook of investors, and the freer movement of funds offer considerable opportunities to developing countries. The underlying rate of return on many investment projects in countries such as Venezuela are high and, if promoters can avoid allowing this return to be offset by country risks, they will be able to attract the capital the project requires. Among funds devoted to cross-border investment, there is a margin for investors to direct a small portion of their portfolio to high-risk, high-yielding investments, such as those which developing countries might offer. In particular, interest rates need to be market-determined in order to set appropriate price signals for both the suppliers and the users of funds.

In addition, the current political situation in Venezuela can be appealing to investors who can be assured that the rules of the game now emerging in Venezuela are backed by a wide political consensus. Although problems existed with former president Carlos Andres Perez, Venezuela still maintained a stable democracy for more than 35 years, and no organized subversive movements exist anywhere in the country. The increase momentum of privatization and liberalization of the economy, further make Venezuela an attractive place for foreign capital.

\textsuperscript{24}International Monetary Funds. "International Capital Markets". 1990.
The investment opportunities in dollars are extensively increasing in the Venezuelan market because the return in dollars by fixed income investments offered in the country substantially offset the risks perceived by some investors, specially when they compare this market with similar ones in Latin America. For example, if we look at Tables 4 & 5 it is apparent that recent returns offered in Venezuelan bonds have reached similar levels of returns to those offered by Mexico, Argentina and Brazil. This is important since these three countries are considered the most stable within the Latin American hemisphere.

Table 4.

<table>
<thead>
<tr>
<th>INSTRUMENT</th>
<th>ANNUAL RETURNS</th>
<th>DURATION</th>
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</thead>
<tbody>
<tr>
<td>Mexico</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synkro</td>
<td>8.00%</td>
<td>360 Days</td>
</tr>
<tr>
<td>T.M.M.</td>
<td>8.00%</td>
<td>360 Days</td>
</tr>
<tr>
<td>Banco</td>
<td>8.00%</td>
<td>360 Days</td>
</tr>
<tr>
<td>Internacion</td>
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</tr>
<tr>
<td>Argentina</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loma Negra</td>
<td>8.00%</td>
<td>180 Days</td>
</tr>
<tr>
<td>Brazil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banespa</td>
<td>8.30%</td>
<td>180 Days</td>
</tr>
<tr>
<td>Mercantil</td>
<td>8.30%</td>
<td>180 Days</td>
</tr>
<tr>
<td>Sudamtex</td>
<td>8.30%</td>
<td>180 Days</td>
</tr>
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Table 5.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Expiration</th>
<th>Coupon</th>
<th>Purchase price</th>
<th>Selling price</th>
<th>Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIMA N.V</td>
<td>4-Nov-94</td>
<td>9.25%</td>
<td>100.25%</td>
<td>101.25%</td>
<td>8.03%</td>
</tr>
<tr>
<td>Vencemos B</td>
<td>9-Sep-96</td>
<td>10.00%</td>
<td>102.00%</td>
<td>103.00%</td>
<td>8.83%</td>
</tr>
<tr>
<td>Sudamtex</td>
<td>14-Jan-97</td>
<td>9.50%</td>
<td>100.25%</td>
<td>100.50%</td>
<td>9.31%</td>
</tr>
<tr>
<td>Paveca</td>
<td>2-Feb-97</td>
<td>9.75%</td>
<td>100.50%</td>
<td>100.50%</td>
<td>9.57%</td>
</tr>
<tr>
<td>R.O.V.</td>
<td>11-Sep-96</td>
<td>9.75%</td>
<td>105.25%</td>
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<td>7.52%</td>
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<tr>
<td>Bariven S.A.</td>
<td>25-Feb-97</td>
<td>9.00%</td>
<td>102.12%</td>
<td>102.63%</td>
<td>8.06%</td>
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<td>TCI</td>
<td>13-Dec-98</td>
<td>0.00%</td>
<td>80.00%</td>
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<td>8.48%</td>
</tr>
<tr>
<td>Bariven S.A.</td>
<td>17-Mar-02</td>
<td>10.62%</td>
<td>107.37%</td>
<td>107.88%</td>
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<td>TCC</td>
<td>31-Mar-07</td>
<td>4.00%</td>
<td>60.00%</td>
<td>61.00%</td>
<td>12.55%</td>
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</table>


**Bond Analysis: Risk vs. Return:**

Dollar-based housing bonds were issued with the idea that they would be acquired by individual investors interested in buying a home, or a client interested in a dollar-based investment which offered a high-yield.

In order to attract investors to dollar-based projects, interest rates offered by developers should be comparable to those offered for similar projects funded in Bolivares. Basically, the risks involved in both types of investments (dollars or bolivares) are the same except for the fact that investment in bolivares could devaluate. Further, realistic interest-rate policies should be employed to attract individuals to invest in real estate.
Dollar-based housing bonds would pay more than one additional interest point (in US dollars) than other similar private issues in Venezuela (see Table 5). This additional interest constitutes a considerable difference when compared to actual inflation rates in the United States of approximately 3.5%. The difference of risk appreciation between these housing issuance's and other bonds should be nothing more than the natural reflection of investing in real estate as opposed to other industries. Depending on an investor's preference and the type of risk that he/she is willing to take, this kind of real estate bond could be viewed as an interesting high risk/high-yield investment.

On the other hand, the differential from investing in bolivares at a passive-interest rate of 60% annually, in comparison with dollar-based housing bonds which offer a return of 10% annually in dollars, when calculated as a bolivares-based investment (at a devaluation rate of 35%) actually produces a total return of 45% annually. This 15% differential in Bolivares represents the risk taken by the investor by assuming the devaluation of the currency. More specifically, to avoid currency risk, the investor agrees to reduce his profits by 15% (calculated on Bs.), on a real estate investment. If the project does not assure the value of the investment in dollars, there is no reason to invest in this instrument which is offering less than others with equal or lower risks. Looking at Graph 5. (Chapter 1) we can see that, to attract investment in local currency, financial institutions in Venezuela paid differential in passive interest rates of over 15% over inflation when compared to US passive interest rates. Thus, it is very important to question whether the project truly assures that the money invested fluctuates in dollars rather than bolivares.
Using this instrument, the real risk facing the investor is the devaluation suffered by Venezuela's currency if it is intended as a dollar-based investment. Further, in this type of issuance's the bondholder has as collateral property (a middle-income unit in Caracas) for which, even though the bond is paying interest in dollars, the price of the property remains in Bolivares.

Comparing the currency devaluation in Venezuela (of the bolivar against the dollar) with the appreciation of real estate due to inflation (Graph 18.), we can observe that for the last 3 years it would have been beneficial for the foreign investor to invest in housing (using the dollar-based housing bonds). The investor not only would have received 10% interest in dollars, but also the properties would have appreciated during 1991 and 1992 in higher levels than the currency devaluation, thus increasing the property values in dollars, which brings higher returns on the investment. During 1990 and 1993 the property's appreciation were equivalent to the devaluation, which means that the investor realized his 10% interest on investment. Any differential between property appreciation and currency exchange rate will indicate an appreciation of the property in dollars. On the other hand, any differential between devaluation and property appreciation will result in losses for the investor.
Although, it appears to be a good investment because in the last three years appreciation of property has been either higher or equal than currency devaluation, this does not assure the future behavior of the market. The investor would be betting on the devaluation of the bolivar against property appreciation, because the price of the property will always be calculated in bolivares. This means that if the Bolivar suffers a devaluation beyond that initially estimated, the developer will probably be able to pay the interest owed, but the nominal value of the bond still is equivalent to an apartment whose price fluctuates in Bolivares. Hence, the actual value of the property has nothing to do with an investment in dollars. But rather, will depreciate as the Bolivar devaluates.
Instead, the fluctuation in price of a middle-income housing project in Venezuela is determined primarily by such market parameters as supply and demand and levels of middle-class income, both of which bear no relation to the dollar. Inflation, which is an extremely influential parameter in the price of Venezuelan real estate, has fluctuated in the last year in direct relation to currency exchange rates, but this does not mean that in the future it will continue to do so, or that the price of property will be directly related to the dollar, or property prices will increase with inflation as the currency devaluates. Given these considerations this means that the investor ultimately has achieved no special security for investing in dollars and is actually being underpaid for the risks taken. For these reasons, I do not believe that a dollar-based investment is a viable alternative. Even if the developer repays the bonds in cash and only uses units under construction as collateral, this is not sufficient to assure the investment against currency devaluation.

After reviewing this mechanism which is currently under consideration in Venezuela, we can more fully appreciate how promoters as well as investors are trying to reduce risk by aligning themselves with an economy in which inflation does not affect fluctuations in prices or market stability. By proceeding in this fashion, they are trying to by-pass these risks by basing their investment in a more solid currency. From this we learn that we should always be aware of what the real parameters are that drive and affect our investments, and that the return should always be equivalent to the risks such an investment implies.
CONCLUSION

Given the condition of hyper-inflation that Venezuela economy is experimenting, structural imbalances have emerged in real estate. The housing market has been affected by increases in construction costs, and a tendency toward increasing interest rates on short- and long-term mortgages in combination with an erosion in the purchasing power of the population. Consequently, there has been a decline in purchasing capacity and in demand in the real estate market. Further, this hyper-inflationary environment has initiated a demand for higher real rate of returns from investments in real estate to compensate for additional risks related to fluctuations in Venezuela's currency. This increase in the real levels of interest rates has resulted in a transfer of wealth from debtors to creditors. With a market driven in this manner, large restrictions arise which make it impossible for developers to function efficiently in actual circumstances.

On the other hand, by realizing that financing terms and interest rates can make or break a project, we find developers who through new financing mechanisms are counteracting the effects of this economic environment on the Venezuelan real estate market. The key needs which developers are seeking to meet by creating new methods of financing are: Lower amounts of initial investment, independence from the mortgaging system of financial institutions, minimizing the costs of raising money, hedging against inflationary cost increases, and most important leveraging risks involved in
transactions. In real estate transactions in Venezuela, some of the risks are: financing, natural risks of construction, price of construction costs, operational and management, environmental, market, inflation and currency exchange risks. In either way, in a context of instability and particularly faced with hyper-inflation, it is too difficult to develop a market for long-term financing instrument. The horizon of transactions is reduced in linear relation to an environment of uncertainty which pervades the economy. This makes financing of construction and housing fundamentally different in Venezuela than those of economies with a more stable price structure.

In analyzing real estate market behavior, pre-sales are thus far the more advantageous financial tool utilized by developers to raise money. Pre-sales not only minimizes developers risks by giving them the financial advantage of raising funds at no cost, but also progressively insure their ability to sell property in an uncertain market. If the developer uses pre-sales approach to sell a specified number of units incrementally and intermittently at the pace of construction to cover costs, then he will be able to protect himself against inflation by taking advantage of the appreciation of his property. But, when looking at the actual numbers arising from appreciation of property price, it becomes apparent that comparing appreciation with the passive interest rates that would be received by the future homeowner, the appreciation of the apartments is favorable because, in most cases, it is higher than the rates paid for bank deposits. However, when one compares the appreciation of real estate with an active interest rate that would have to be paid by developers to get a mortgage, there is no margin wide enough when selling appreciated property to compensate for the risk: of having to pay a 70%
yearly interest rate on a mortgage, of not selling the apartments on time and/or incurring low appreciation in the real estate market. Thus, the risk/return balance remains unfavorable to developers.

As discussed by this paper, when looking at financial alternatives presently available in Venezuela's real estate market, it is apparent that all of them are actually variations of the pre-sales system. For instance, the graduate payment mortgage became a financial tool enabling savings and loans institutions to enter the real estate market by fulfilling the needs of middle-income families to purchase property while expanding bank activity in the pre-sales market. Similarly, housing bonds which might initiate a secondary market in real estate financing in Venezuela, is also a way of providing low- and middle-income families with an opportunity to become homeowners. This methodology however, creates a different approach to the pre-sales market by offering an alternative in which the buyer pays up front the full purchase price and in return, receives both the property and the possibility of earned interest while the pre-paid property appreciates during construction. This mechanism was created with these characteristics, because of the fixed-set prices due to the housing law. Finally, the dollar-based housing bond which comes from the idea of the previous housing bond, calculates its prices based as if where a pre-sales operation.

In this analysis, the intention is to emphasize the contribution of the real estate sector, not only economically and socially, but also in designing new economic development policies. Given the determinants for the demand of real estate in Venezuela which are liquidity, housing price, mortgage rates, availability of credit and currency exchange rates, in order to
create an effective path for housing demand it is necessary to consider several factors:

- **Stabilizing housing prices**, when looking at actual market configurations, this only seems possible if costs of raw materials are stabilized.

- **Reducing interest rates and expanding available credits**, while these are highly influenced by general macroeconomic issues and specific monetary standards, both suppose positive domestic economic growth and the efficiency of the financial institutions.

- **Stabilizing the value of currency**, this might be achieved by economic growth that provides incremental alternatives to maintain wealth in domestic financial investments.

- **Achieving an environment of political and social stability**, which would make possible the materialization of Venezuela’s economic potential.

- **Controlling inflation**, by implementing successful monetary and fiscal policies.

- **Making housing policy law adequate relative to the housing market**, so that it is flexible enough to confront inflation successfully, which must be considered in order to establish the range of housing prices covered. Also should consider the incorporation of other mechanisms to raise more resources.
Stimulating new types of investors, such as pension funds and insurance companies by giving tax advantages implementing creative financial instruments and new capital markets.

In addition the real estate private sector should:

- Increase its capacity to react to new market conditions, by incrementing productivity and successful management strategies.
- Increase creativity in its search for new construction methods, and reduce its costs without lowering quality, especially in the low-income housing market.
- Develop new financial plans, which can be adapted to the market, the population's evolution of purchasing power and its indebtedness.

These factors are in reality, primarily symptoms of a stable economic situation which would provide an environment for effective economic growth for the country as well as for national industries and individuals. By accomplishing this, investment opportunities in Venezuela would increase, while the fluctuation in prices would decrease. If implemented, demand would expand, developers could function more efficiently, and the well being of the population in regard to housing will substantially increase.
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