



The Rental Market in Argentina:

An Assessment Study

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Abstract¹

This study analyzes the current situation of the rental market of Argentina. It is characterized by a growing percentage of households demanding houses for renting up to the point that, for first time in more than 50 years, the ownership rate dropped between population censuses. Tenants are middle and upper income families, as the poorest have increasingly owned and/or occupied substandard housing, sometimes without title. The lack of a mortgage market after 2001 explains the surge of the rental market. Given the increase in rents, some groups were more adversely affected. Other features affecting the supply and demand in this market are also analyzed.

JEL classifications: G21, R21, R30, R31, R38, R52, B22

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Acronyms and Main Legislation

BCRA	Banco Central de la República Argentina
CCI	Construction Cost Index
CEDEM	Centro de Estudios para el Desarrollo Económico Metropolitano (CEDEM) del Gobierno de la Ciudad de Buenos Aires
CONAVI	Consejo Nacional de la Vivienda
CPI	Consumer Price Index
EPH	Encuesta Permanente de Hogares
FONAVI	Fondo Nacional de la Vivienda
INDEC	Instituto Nacional de Estadísticas y Censos
IPV	Instituto Provincial de la Vivienda
ISAC	Indicador Sintético de Actividad de la Construcción
PF	Programas Federales
PPI	Producer Price Index
SSDUV	Subsecretaría de Desarrollo Urbano y Vivienda
WPI	Wholesale Price Index

Law 21,342 (1976) - Deregulation of the rental market

Law 21,581 (1977) – Creation of the FONAVI

Decree 8,912 (1977) – Law of the territorial ordering and land use. Province of Buenos Aires.

Law 23,091 (1984) – Current law governing the rental market

Law 24,130 (1992) – Decentralization of the FONAVI towards the provinces

Law 24,441 (1994) – Law of real estate trusts and mortgage loans

Law 24,464 (1995) – Creation of the Housing Federal System

Law 25,402 (2000) – Deduction of mortgage interest from the income tax returns

Law 25,570 (2002)- Uses of funds from FONAVI.

Executive Summary²

The big picture. In Argentina houses, especially apartments, are demanded not only for their own use but also as an asset class as part of a diversified portfolio. Investment in houses is pervasive among small investors to complement labor and retirement incomes. This trend is exacerbated during periods of moderate to high inflation. Consequently, property prices tend to deviate from their long-term trend during inflationary processes and, as at present, when the economy is in a boom period.

Higher house price-to-income ratios most greatly affects newly formed households, young people and the poorest, who also are outside of the (nearly nonexistent) mortgage market. Most of them have to substitute their demand toward the rental market. Others substitute purchasing houses of substantially lower quality (poorer families) and sometimes with irregular or illegal titles.

Additional demand in the rental market pushes the rents up increasing the financial vulnerability of tenants. *Ceteris paribus*, the rental yield (rent-to-property prices) should increase. However, demand from investors pushes the property prices up, reducing the rental yield.

Houses are desirable investments for at least two reasons. First, property provides a hedge against inflation. Secondly, property is considered a relatively safe investment, given that alternatives such as bank deposits have been confiscated at least twice in the last 30 years (in 1990 and 2001).

Currently, inflation rates have accelerated since 2006, subsequently reaching two-digit figure. Macroeconomic policies are highly expansionary; the monetary authorities keep the main interest rates below inflation inducing the purchase of durable goods and foreign assets. Not surprisingly, in 2010 a historical record was set in terms of investment in construction and in houses.

From the microeconomic perspective, it must be noted that, given that small investors are more prone to purchase properties for renting, the rental market became completely decentralized. Rents and units available are freely determined by the interaction of supply and demand.

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Most landlords are middle-aged and retired persons who put their savings in real estate to provide complementary retirement income when they get older. Real estate developers prefer to construct apartments and houses to sell to those small investors rather than rent out housing themselves.

The main objective of state housing policies is to provide houses under ownership. All resources are directed toward this goal, and no efforts are devoted to formulating a rental policy. Neither municipalities nor provinces, moreover, have enacted special regulations to encourage the development of rental housing.

From the demand side, the number of families renting their home has risen in the last 10 years. The practical nonexistence of a mortgage market has pushed young and poor households into the rental market. This is the main driver increasing the rental ratio, making families financially vulnerable in the face of any major change in macroeconomic or labor condition.

Some basic facts. In 2010 there were more than 12 million households living in the country and 13.8 million houses. The housing stock grew 1.4 percent annually, as the number of units increased by 1.7 million during the last decade (175,000 per year).

Nearly 82 percent of houses were occupied in 2010. The number of families grew 1.9 percent annually (210 thousand). A comparison of the number of occupied houses built and the number of new households formed implies that 7 percent of families, or 854,000, share their shelter with other households.

Approximately 494,000 houses are unoccupied and available for renting. *Thus, the supply of houses for rent, including those currently occupied and rented, grew at a rate of 6.7 percent yearly to provide for soaring demand.*

Under reasonable assumptions, it was found that the ownership rate fell from 75 percent to 69 percent in the last decade, whereas rental rate grew from 11 percent to 18.5 percent in the same period.

That is, out of the 209,000 families formed annually, 84,000 became proprietary, 50,000 were occupant (with or without owner's permission) and 110,000 rented houses. Thus, more than half of the new households became tenants.

The number of households renting are 2.25 million, a growth rate of 7.25 percent yearly between censuses.

Ownership rates dropped for all the income groups, but especially for lower income households, where the rate fell by 11 percentage points between 2010 and 1996. In contrast to changes among higher income groups, the poorest families were more likely to become occupants than renters.

Most of this change occurs between 2001 and 2010, years marked by a major economic crisis (2001-2002) and the virtual disappearance of housing finance, except for that administered by public policies.

Distribution of tenants across income deciles shows that renting is more usual among high earners. Among younger household heads (20 to 25 years old) the percentage of renters is as high as 50 percent, steadily declining to merely 6 percent among household heads more than 70 years old.

Rent-to-income ratios. Due to the lack of updated and systematic information of rents, other proxy variables have been used to adjust values of 1997 up to 2010. Between 1997 and 2010, CPI rents grew 96 percent, the construction cost index 327 percent and national average property prices 443 percent. For comparison, in the same period the aggregate consumption deflator increased by 183 percent and households' total income by 279 percent.

On average, rents represented 25 percent of tenants' family income in 1997. Adjusted by CPI rents, the rental ratio fell by one half between that date and 2010.³ When other proxies are used, rental ratios increase between 3 and 11 percentage points (to 30 percent and 46 percent, respectively).

The greatest growth occurred in Buenos Aires city, at rates between 9.8 and 19.5 percentage points, which is indicative of demand pressure on the rental market. Moreover, the group of provinces in the northwest (La Rioja, Catamarca and Santiago del Estero) also shows a notable increase of 5-14 percentage points, as well as the provinces in the northeast (Misiones and Corrientes) by 3 to 11 percentage points.

Interestingly, different impacts emerge as changes in relative prices between rents and household income favored poorer families.

Owning versus renting. Historically, house prices grew 3.4-3.7 percent annually if deflated by CPI. In US dollars, properties appreciated 9.3 percent annually. Over the last eight

³ This figure seems to be implausible, so it was discarded in the following analysis.

years prices grew faster than the historical average. For a shorter sample period of CPI Rents, they grew in real terms in the 1990s and remained constant during the 2000s.

In this study two approaches are followed to evaluate whether house prices are over or undervalued relative to rental values. The first one estimates the imputed rent to owners to compare with effective rents in the market. If the former is lower than effective rents, it can be stated that owning is more affordable than renting and tenants could be better off changing their tenure condition. The second approach compares the estimated rental yield (rents-to-prices) with those observed in other countries. Comparatively a high rental yield, for instance, implies that in the country being a tenant is expensive vis-à-vis the rest of the world and vice versa.

User cost can be compared to rental yields, for instance, the 6.8 percent used in the following section. Owning a property costs a rate of 10.8 percent in 2010. This means that renting is cheaper than buying a house unless our assumptions were incorrect. In this sense, if expected property price growth is higher than our supposed 3.45 percent, for instance, 7.4 percent annually, the user cost would be exactly 6.8 percent, the same as our estimated rental yield. That is, owners, including investors, could be expecting faster property appreciation than the historic value of 3.45 percent.

Comparing imputed to effective rents, *we found that after 2005 purchasing a property becomes more convenient than renting, relative to the long-run average.* Except for a couple of years during the international financial crisis, the last two periods (2010-2011) were as favorable as before for the respective ownership choices. However, after the most recent financial turmoil, the ratio tripled in comparison to its pre-2008 level. Finally, in comparison to the 1990s, owning a property is more expensive today.

All these circumstances imply that tenants today are better off in relative terms than in the 1990s and during the years prior to the financial crisis. This seems to support the hypothesis that house prices are unaffordable and push families to rent, although new supply from investors keeps the rental values growing slower than house prices.

Compared to other cities around the world, *Buenos Aires seems to be cheap to buy and relatively expensive to rent,* given the estimated rental yield of 6.8 percent for a typical 120-square meter apartment. However, considering all Latin American countries, *Buenos Aires presents the third lowest rental yield in a region of comparatively high yields.* This is a direct consequence of the comparatively more elevated opportunity cost of funds for Argentines.

Real estate developers. The construction industry is made up of more than 19,800 formal companies. Small companies dominate activity, representing 75 percent of firms in number and employing 20 percent of the workforce, with an average of three workers per company. Large companies mostly concentrate on public infrastructure or commercial construction. Smaller companies and a number of developers specialize in apartment buildings or suburban gated communities. Detached houses are built by independent builders (architects, civil engineers, etc.).

Profitability. In the 1980s the house price to construction cost ratio reflects the industry's relatively low profitability. Over the following decade, in the midst of a major reform process, including the development of a mortgage market, the demand for new houses increased, raising the ratio of prices to costs. However, the third period, which began after the 2001-2002 crisis, boosted demand for houses as safe havens pushing their prices up relative to building costs.

Construction costs. Construction costs per square meter are estimated to be at US\$ 516 in 2008 in Buenos Aires city. In 2011, these costs would have reached US\$ 717. Another source calculates current costs as much as US\$ 920 per square meter. Cost of land varies according widely: from US\$ 480 per square meter in the cheapest area (La Boca) to US\$ 2,100 in the most expensive areas in the northern city.

Input supply. Domestic production of materials used in construction in most instances met the demand arising from historically high levels of activity in the industry. In no material is there a bottleneck that would prevent expansion of investment in construction.

Land supply. There is no single law at national level regulating land use and zoning. On the other, there is a great disparity among provinces and municipalities in the reach and application of regulation.

This feature generates enormous differences in costs of supplying additional land, which in turn engenders different degrees of informality. Finally, *it must be noted that no special treatment is given to certain types of new construction, including rental units.*

Housing finance. There are two main sources: bank mortgages and public housing programs. Other types of financing or mortgage from non-banking institutions are not common.

Both sources, mortgage loans and state programs, are used to purchase properties for their own use. Nonetheless, the former can also finance purchase of properties by real estate investors to rent them. However, fiscal incentives and other privileges granted to ownership,

such as the perceived lower default rates for inhabitants than investors, bias the mortgage market towards loans to inhabitants.

A massive state housing program has been in place for several decades in Argentina, based on a supply-side, turnkey production system targeting the poor. It is not based on a standard mortgage-type contract, although households have to pay a (generally fixed) monthly payment for a period of time after the house is allocated. The payment implies a generous subsidy that deters any fair private sector competition in this low- and middle-income market.

The FONAVI (Fondo Nacional de la Vivienda, National Housing Fund) and Programas Federales began in 1972 and 2004, respectively, and they are the most important housing programs currently. Together they supply one quarter to one third of the flow of new units in the country each year, and since their inception they have accounted for almost one tenth of the country's housing stock.

It is interesting to note that, compared to the flow of mortgage loans, government housing resources have grown faster and are presently larger. This is an indication of both the decline of private sector loans for housing and the increasing role of public production assumed by the new administration in charge since 2003.

Who are government programs reaching? Although houses were delivered to the poorest 40 percent of families, more than 10 percent of heavily subsidized houses were delivered to households in the fifth quintile. Leakages towards higher-income families thus remain important.

It must be stressed that *there is no state program related to rental housing*. Nor is the government considering this type of assistance for the years ahead. Moreover, no significant changes are planned in other types of programs. The goal was (and still is) increasing ownership rather than promoting a rental market among low- income families.

According to the law that created the FONAVI, resources must be used to finance total or partially the purchase and/or construction of houses, complementary works, infrastructure and other related services and amenities. Basically, there was no way to implement programs guaranteeing rent payments for low income households, but there were measures for building houses for renting.

A short-lived boom in mortgage loans took place in the mid-1990s as a response to favorable macroeconomic and institutional conditions. Mortgage loans increased from practically

nonexistent before these reforms to the equivalent of 4 percent of GDP in 2000. After the macroeconomic crisis of 2001-2002, the market shrunk to only a 0.8 percent of GDP in 2010.

Why is the market for housing loans so underdeveloped? Several factors explain this market's small size. On the supply side, negative real interest rates discourage savers from putting their money into bank deposits, the main source of funds for financial institutions; current legislation prohibits loans and deposits from being indexed by CPI or wages. Moreover, previous confiscations of deposits further discourage small investors from using those instruments.

On the demand side, as mentioned before, macroeconomic conditions push small investors to purchase houses, considered a safe haven in Argentina. This in turn puts pressure on property prices and makes ownership less affordable for middle and low-income families; in addition, nominal interest rates are well above the two-digit threshold, which prevents many households from applying for loans.

Although investors can take advantage of mortgage loans to purchase houses, the small size of the market indicates that acquisitions are mainly not leveraged.

How does this underdeveloped mortgage market affect the rental market? The clearest effect is that households delay the purchase of a house, thus putting pressure on the rental housing market. This additional demand implies that, given the supply, rents must go upward to clear the market. On the other hand, purchases from investors for renting increase current prices and depresses rents. The results found previously show that rental yields are high in an international comparison, indicating that demand pressure is prevailing.

Legal framework. Contracts between tenants and owners are ruled by Law 23,091, originally enacted in September 1984. This law is applied nationwide, although provinces have different norms ruling its implementation.

The norm sets forth two years as the minimum length of a lease; landlords cannot terminate a lease prior to its end. Denomination of leases in foreign currency has been prohibited since 2002. In addition, frequent adjustments for inflation are not permitted, although infrequent adjustments are allowed if official price indexes are used. Usually, leases include the possibility of renegotiating monthly rents every year.

Payments must be established on monthly basis. As a guarantee, the landlord can require up to the equivalent of one month's rent as a refundable security deposit. In practice, landlords

usually require a two-month deposit and other pledges such as another guarantor with real property. Tenants must demonstrate formal incomes that ensure they can pay the monthly rent.

Contracts are in force when the two parties sign the document. Except for small tax duties in some jurisdictions (e.g., stamp duties in the province of Buenos Aires), there is no requirement for the document to be officially witnessed.

There are two legal procedures to remove tenants in case of overdue rent. The first is an eviction lawsuit, which involves a lengthy process that can take from six months to one year, depending on judges' criteria and provincial codes of procedure.

The second procedure, immediate eviction, has been increasingly applied in the last four years, although the law in some provinces has permitted this procedure for the last eight years. This procedure allows the landlord to recover the property in two to four months and to incur lower legal expenses. Jurisprudence in this area is not uniform, however, and in applying this procedure some judges take into consideration the tenant's situation (for instance, whether there are children in the household). This increases uncertainty regarding the final outcome. In order to pursue this course of action, moreover, landlords must pay a refundable deposit, which can sometimes be a deterrent.

Additionally, institutional problems occur when disputes involving small amounts or differences arise between tenants and landlords. In fact, there are no specific bodies (e.g., administrative agencies) where such disputes can be resolved quickly and at low cost.

Other laws. Law 24,441 of December 1994 (aka, "Ley de Fideicomisos") introduced several innovations into the functioning of housing and mortgage markets, which permitted a major in a secondary mortgage market during the 1990s.

Law 25,402 of December 2000 allowed interest on mortgage loans to be deducted from income tax returns up to a limit of \$4,000 (less than US \$ 1,000) for houses purchased for owner habitation rather than as an investment. Also, the amount of the outstanding debt can be deducted from taxes on net wealth ("Bienes Personales") to calculate the taxable amount. Both measures would hypothetically benefit ownership of houses given the absence of other compensatory incentives for renting. However, given the small size of the mortgage market, the effect is irrelevant.

Guarantees for renters. A household needs more than a demonstrable income to rent a property. Usually landlords require that tenants guarantee the lease with another proprietor's

deed. Since deed registries are not interconnected across provinces, landlords usually demand usually titles of properties located in the same city as the rented house. Lack of access to such a guarantee seriously complicates renting for newcomers.

A market solution has emerged as private entities, generally insurance and financial companies, offer contracts to guarantee debts or rental contracts with their own collateral. Costs for this service are equivalent to 5-6 percent of the total value of the rental contract.

There is also an informal market offering collateral for rental contracts. This collateral is offered by landlords who assume the guarantee for a cost twice that in formal markets. The main participants in this market are immigrants and informal workers who usually lack access to financial entities.

Bills in the Congress. No legislative proposal related to rental markets is currently under active consideration in the National Congress. However, several bills are under preliminary consideration.

1. Introduction

The Argentine rental market cannot be analyzed in isolation from the country's macroeconomic cycles and crises as well as from lack of confidence in its economic and political institutions. As stylized facts, the current rental market can be seen as responding to the following factors:⁴

- High inflation and negative real interest rates push demand towards foreign assets and real estate. A diversified portfolio will incorporate several asset classes including properties.
- Demand for houses as an asset class is pervasive among small investors to complement labor and retirement incomes. Illiquidity is compensated for by the rents paid and the value of houses as a hedge against inflation.
- Property prices consequently deviate from their long-term trend during inflationary processes when the economy is also enjoying a booming period as currently it is. This deviation also implies that the ratio of house prices to household income soars, and some families can hardly afford to purchase their houses.
- This particularly affects newly formed households, young people and the poorest, who are excluded from the (almost nonexistent) mortgage market.
- Most of those individuals must substitute their demand toward the rental market. Others substitute purchasing houses of substantially lower quality (poorer families) and sometimes with irregular or illegal titles.⁵
- The additional demand in the rental market pushes rents up, increasing the financial vulnerability of tenants. *Ceteris paribus*, the rental yield (the ratio of rents to house prices) must increase.⁶ On the other side, the demand from investors pushes the property prices up reducing the rental yield. The result will be undetermined without a deeper knowledge of the markets' parameters.

⁴ These facts have been developed in Auguste, Bebczuk and Moya (2011) to explain the demand for mortgage market.

⁵ See Cristini, Moya and Bermúdez (2011) for the Argentine case of quality substitution. See also Auguste, Bebczuk and Moya (2011).

⁶ A similar result is found when the mortgage market is nonexistent, even in the absence of pressure from small investors. An illustrative case is that of Uruguay (see Moya, 2011).

Broadly speaking, since 1980 four periods can be distinguished in Argentina's recent macroeconomic history. During the 1980s, the Argentine economy experienced the Lost Decade, common to Latin America, which was marked by declining GDP, rampant inflation and stagnant output per capita. The following decade was one of transformation of the economy from an import substitution model into one more open to international trade and to foreign flows and investors. Additional important macroeconomic changes included price stabilization through the implementation of a currency board, which brought historically high inflation down toward international standards. The market reforms undertaken included those in the mortgage market, which allowed its short-lived development.

In 2001, after four years of stagnant economic activity and a bank run against deposits, a major financial and economic crisis erupted. The currency board was abandoned, causing the domestic currency to depreciate by 300 percent in only a few months, and the unemployment rate soared to 25 percent. During the crisis deposits were frozen and partially confiscated, but this was not the only episode of deposit confiscation in Argentina; in 1990 large deposits were compulsorily exchanged for government bonds. Argentine economic history displays recurring banking and currency crises.

Surplus capacity, the peso depreciation and a remarkable improvement in the international prices of agriculture products subsequently pushed the Argentine economy into a period of firm expansion, recovering previous levels of GDP and employment. However, inflation accelerated after 2006 and has since reached two-digit rates since then. Macroeconomic policies are still expansionary; the monetary authorities keep the main interest rates below inflation, inducing the purchase of durable goods and foreign assets.⁷

⁷ Capital outflows from the private sector accumulated since 2003 reached US\$ 54 billion, equivalent to 14 percent of 2010 GDP.

Table 1. Argentina: The Macroeconomic Context

Variable	1980-1990	1991-2000	2001-2002	2003-2010
GDP growth (a.a.)	-1.3%	4.1%	-7.7%	7.6%
Gross Fixed Capital Formation (a.a.)	-8.6%	8.1%	-26.8%	17.5%
Investment in Construction (a.a.)	-8.0%	5.8%	-21.6%	14.0%
GDP per capita in US\$ (*)				
	5,378	8,209	8,437	12,969
Inflation rate (a.a.)(**)	548.0%	4.5%	11.6%	9.0%
Devaluation rate (% , \$ per US\$ - a.a.) (**)	454.6%	0.1%	78.9%	2.6%
Population Growth (a.a.)	1.7%	1.2%	1.0%	1.0%

Source: Author's calculations based on Ministry of Economy, INDEC, Banco Central de la República Argentina and IMF.

(*) In US\$ at PPP, WEO, IMF. (**) For 1991-2000 since April 1991 when the Currency Board was launched.

In this context, it should be noted that Argentina's rental market is a completely decentralized one where small investors have acquired properties to earn some rents out of them. As a consequence, most landlords are middle-aged and retired persons who put their savings in real estate to obtain a complementary retirement income. Real estate developers thus prefer to build apartments and houses to sell to those small investors rather than rent them out themselves.

Currently, the main objective of state housing policies is to provide houses under ownership. Virtually all resources are dedicated to this objective, and little effort is devoted to formulating a rental policy. Neither municipalities nor provinces have enacted special regulations to encourage the development of rental housing.⁸

From the demand side, the number of families renting their home has risen in the last 10 years. The practical nonexistence of a mortgage market has pushed young and poor households into the rental market. This is the main driver of increases in the rental ratio, which make families financially vulnerable to any major change in macroeconomic or labor conditions.

⁸ From the political economy perspective, one can argue that pressure groups are widely dispersed enough to push for changes seeking more favorable regulations.

2. The Housing Market: Current Conditions and Characteristics

2.1 Housing Stock and Tenure Rates

In 2010 there were more than 12 million households living in the country and 13.8 million houses, including those occupied by families and by groups of families (aka collective houses).⁹ This stock grew 1.4 percent annually, representing an increase of 1.7 million in the last decade (175 thousand units per year).

In the same year, approximately 82 percent of houses were occupied by owners, tenants and those in other conditions, excluding collective houses. About 18 percent of houses or 2.4 million were unoccupied units, mainly vacation homes, unfinished houses, and units for sale or renting.¹⁰

The number of occupied houses increased 1.5 percent yearly, at 160 thousand units per annum, whereas the number of families grew at an average rate of 1.9 percent a year (210 thousand). This implies that approximately 7 percent of families, or 854 thousand, live sharing their shelter with other households. In 2001, 3.5 percent were in this condition, meaning that 50 thousand families were added annually to this category.

In 2001, 315 thousand houses were considered to be ready to rent, representing 22 percent of the total stock available for rent. The total supply of houses for rent, including occupied and unoccupied houses, reached 1.433 million in 2001, an annual increase of 1.9 percent, surpassing the average growth rate of the total number of houses (1.8 percent).¹¹

In 2010, we estimate that approximately 494 thousand units were unoccupied and available for renting. This implies that supply of houses for rent would have grown at a rate of 6.7 percent to provide for the increasing demand.

Most unoccupied houses are located in large provinces and urban areas: Buenos Aires city and Greater Buenos Aires, Santa Fe and Cordoba. More specifically, in Buenos Aires city, one third of unoccupied houses were for rent, one fourth in Greater Buenos Aires and one fifth in the remaining provinces (See Annex 1. Housing Market by Provinces).

⁹ This includes nursing homes and so on.

¹⁰ This characteristic of an elevated vacancy rate compared to the region (median of 2.8 percent) was stressed by Angel (2001).

¹¹ It must be noted that 2001 was a period of low economic activity, being the fourth year in a row with declining GDP; it seems likely that the number of vacant houses were above the historical average.

Table 2. Households and Housing Stock, 1991-2010, in Thousands

	1991	2001	2010 (*)	Average annual growth %	% total as of 2010
Total households	8,927	10,074	12,172	1.9%	
Total houses	10,080	12,042	13,812	1.4%	100.0%
Occupied houses	8,515		11,318	1.5%	81.9%
		9,713			
Collective houses	377		23.6	-27.7%	0.2%
		609			
Unoccupied houses	1,187		2,471	3.7%	17.9%
		1,719			
Unoccupied houses for rent	86			4.6%	3.6%
		315	494		
Supply for rent (1)	1,187		2,745	6.7%	19.9%
		1,433			

Source: Census data, various years.

Notes: (1) Unoccupied units for rent + rented houses. (*) We assume that the rental ratio for the country is equal to that of total urban population, based on EPH 2010 4Q. We assume that 20 percent of unoccupied houses are for rent. In 2001 this share was 18 percent.

The ownership rate grew strongly in the last 50 years. In fact, in 1960 about 57 percent of families owned their own houses, whereas this rate was 75 percent in 2001. That is, five million new homeowners were added in 30 years. In the urban agglomerations, the ownership rate reached 69 percent in 2010.

If we assume that the tenure distribution is as the observed in the urban agglomerates, we find that the ownership rate should have fallen 6 percentage points, whereas the rental rate would have grown 7.4 percentage points. In number of households, from the 209,000 families formed annually, 84,000 became proprietary, 50,000 occupant (with or without owner's permission) and 110,000 rented houses. That is, more than half of new households became tenants.

Notice that the measure of ownership includes to those families that own the house and the land as well as those owning the house but not the lot. This situation was representative of 4.1 percent of total households (5.9 percent of owners). (See Annex 2.2. Tenure Conditions in Urban Areas, for further details).

The number of households renting houses was 2.25 million, about 18.5 percent of all households in 2010, and it was the most dynamic tenure condition given its growth rate of 7.25 percent yearly.

Table 3. Households and Tenure Conditions, Urban and Rural Areas, in Thousands

Type of tenure	1960	1980	1991	2001	2010 (*)	Annual growth rate (%)			
						1980/1960	1991/1980	2001 / 1991	2010/2001
Owners	2,532	4,809	6,051	7,545	8,389	3.26	2.11	2.23	1.07
Owners(House and plot)	na	na	5,487	7,112	7,894	na	na	2.63	1.05
Owners(House only)	na	na	564	433	494	na	na	-2.61	1.33
Tenant	,198	1,051	1,102	1,118	2,251	-0.65	0.43	0.15	7.25
Occupant	317	817	873	826	1,332	4.85	0.61	-0.55	4.90
Other	357	426	902	584	200	0.89	7.05	-4.25	-10.17
Total	4,403	7,103	8,927	10,073	12,171	2.42	2.10	1.22	1.91
	As % of total					Absolute Change %			
Owners	7.5	67.7	67.8	74.9	68.9	10.20	0.08	7.12	-5.98
Owners(House and plot)	na	na	61.5	70.6	64.9	na	na	9.14	-5.74
Owners (House only)	na	na	6.3	4.3	4.1	na	na	-2.02	-0.24
Tenant	27.2	14.8	12.3	11.1	18.5	-12.40	-2.46	-1.24	7.39
Occupant	7.2	11.5	9.8	8.2	10.9	4.30	-1.72	-1.58	2.75
Other	8.1	6.0	10.1	5.8	1.6	-2.10	4.10	-4.30	-4.16
Total	100.0	100.0	100.0	100.0	100.0				

Note: n.a: corresponds to not available. (*) Based on the EPH 2010 4 Q.

Source: Author's calculations based on Population and Housing Censuses.

As mentioned above, in the main urban agglomerations, where about 63 percent of the country's households reside, ownership rates dropped to 69 percent in 2010, whereas 14 years before it was 77 percent. This reduction occurred while the percentages of tenants and of occupants showed steady increases. This fact represents the increasing affordability problems and the lack of mortgage loans, which make families unable to acquire their own homes.

Table 4. Main Urban Areas: Households by Tenure Condition, in Thousands and Percentages

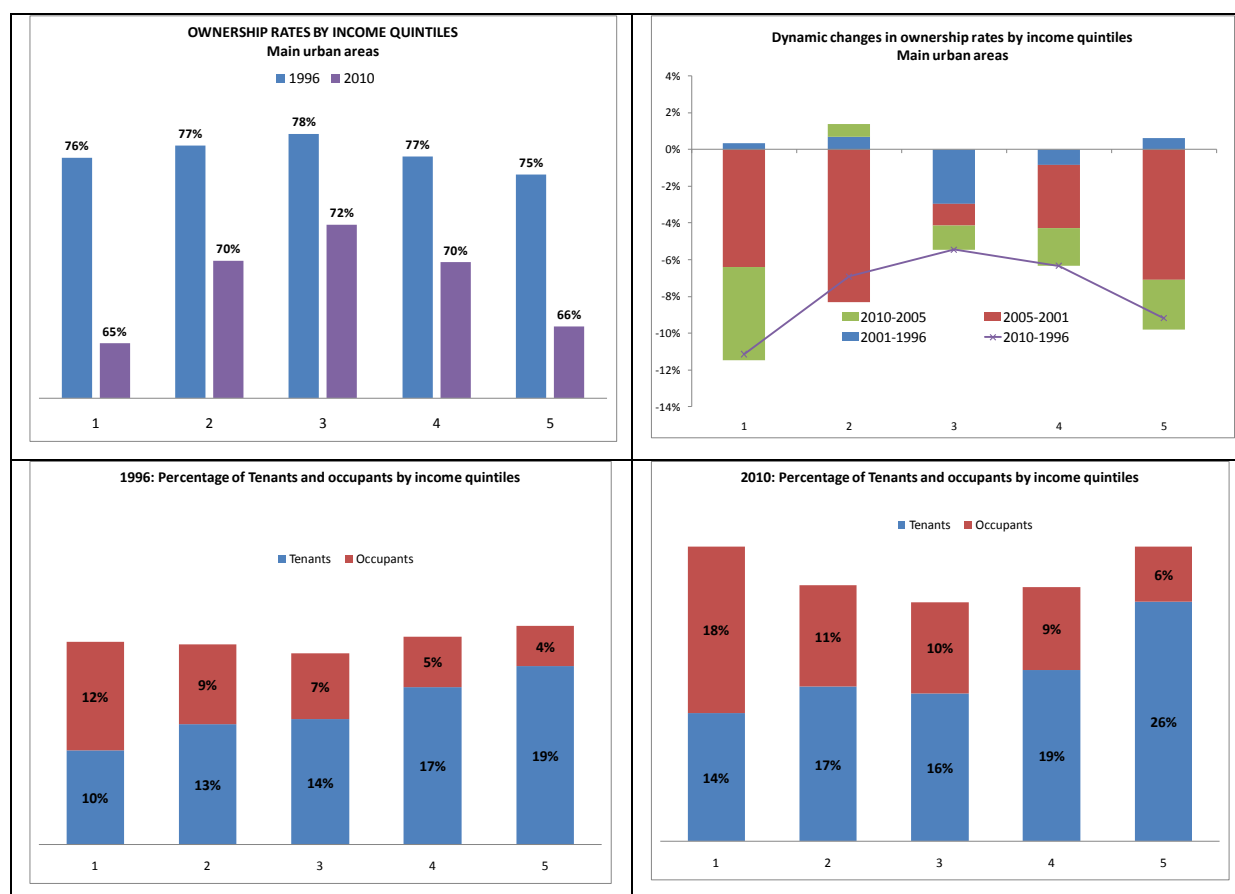
	Owners	Tenants	Occupants	Others	Total	
1996	4,698	902	461		6,123	
				63		63.7%
2001	5,219	1,001			6,841	
			539	82		67.9%
2005	5,027	1,173			7,080	
			736	144		63.6%
2010	5,266	1,413			7,640	
			836	125		62.8%
In %						
1996	76.7%	14.7%	7.5%	1.0%	100.0%	
2001	76.3%	14.6%	7.9%	1.2%	100.0%	
2005	71.0%	16.6%	10.4%	2.0%	100.0%	
2010	68.9%	18.5%	10.9%	1.6%	100.0%	
2010-1996	-7.8%	3.8%	3.4%	0.6%		

Source: Based on EPH 1996, 2001, 2005 and 2010 and censuses.

The change in tenure conditions happens all across income groups. In fact, ownership rates dropped for all groups, but especially for lower-income households, where the rate declined by 11 percentage points between 1996 and 2010. Different from higher income groups, the poorest families moved as occupants more than as renters. Being occupant implies living in a house without paying rents, but it can be with or without owners' permission.

From a dynamic point of view, it can be noted that most of this change occurs between 2001 and 2010, precisely during years of a major economic crisis (2001-2002) and the practical disappearance of housing finance, except for public policies.

Figure 1. Changes in Tenure Conditions, 2001-2010



Sources: Author's calculations based on EPH 2010.

2.2 Houses' Quality and Tenure Conditions

Households choosing whether to purchase or to rent a property also face another important dimension, choosing the quality of the house. Quality involves several aspects related to the home's comfort, among them, materials of construction and basic services and amenities available (for instance, having electricity, running water and sewerage as well as living in safe areas, having access to public transportation, etc.).

Moreover, young families can choose to rent a house rather than to purchase one to maintain a high level of quality. Middle age household' heads instead can purchase a house giving up some comfort.

Cristini, Moya and Bermúdez (2011) estimated for Argentina a model of tenure choice but introducing the possibility of categories that represent the tenure as well as quality conditions of houses. As expected, the probability of renting decreases as the age of the household head increases, regardless of the quality of the unit. In fact, until 34 years of age the average household head is more likely to rent a house of reasonable quality. However, after that age the head is more likely to purchase a house, while giving up some degree of comfort. Also, renting a house of good quality is more probable than renting a substandard home, with the exception of older household heads. Owning a lower quality house is always more preferable for the average household head than renting any other type of house, except for young heads. By income levels, the authors found that this variable is not a good predictor of choices between renting and owning a house, but it is a determinant of the quality choice.

These findings imply that tenants are expected to live in better houses in terms of materials and other services than owners for heads older than their thirties. Also, when controlled for by age and other determinants, rental and ownership rates are not determined by family income. However, quality changes with family earnings.

In this study, the same approach as in Cristini et al. is followed to characterize differences in quality by tenure condition. That is, five different tenure choices are considered: owning and renting a good quality house, owning and renting a low quality unit or any other remaining options (such as living in a dwelling provided by the employer or occupying it with the owner's consent). The following table summarizes the definitions involving each category.

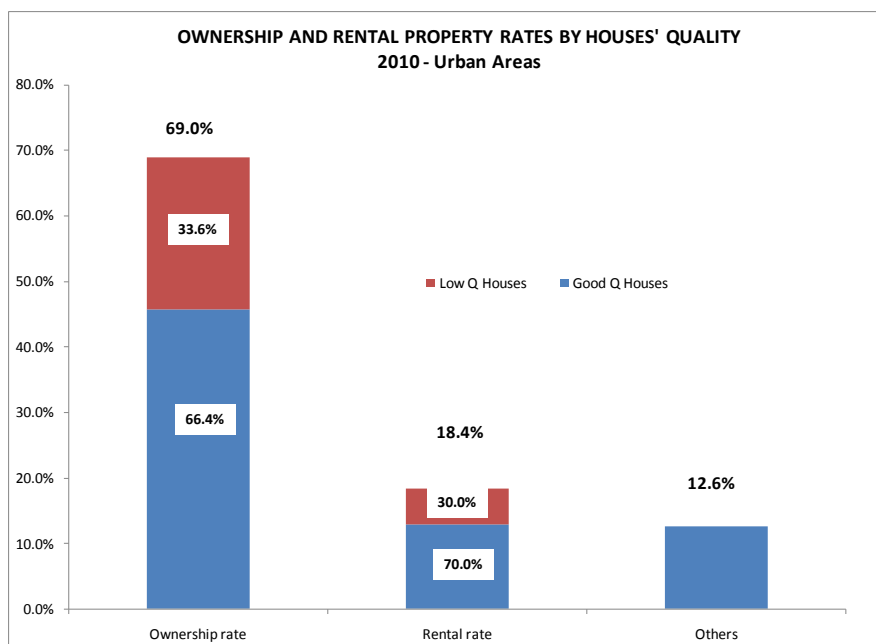
Table 5. Tenure Condition and House Quality Definitions

Tenure	Category in the EPH	Quality standard
Ownership	House and plot ownership	All except those included in Owning and Renting a low quality house.
Renting	Renting	
Owning a low quality house	House and plot ownership House only ownership	Any of the following: <ul style="list-style-type: none"> - Located near a garbage dump - Located in a flooding area - Located in a slum - Plumbing facilities unavailable - Lack of electricity - Shared bathroom - Precarious outer wall, roof, floor or ceiling material - Overcrowded rooms (e.g. more than 2 persons)
Renting a low quality house	Renting	
Others	The remaining categories	All

Source: Based on Cristini, Moya and Bermúdez (2011).

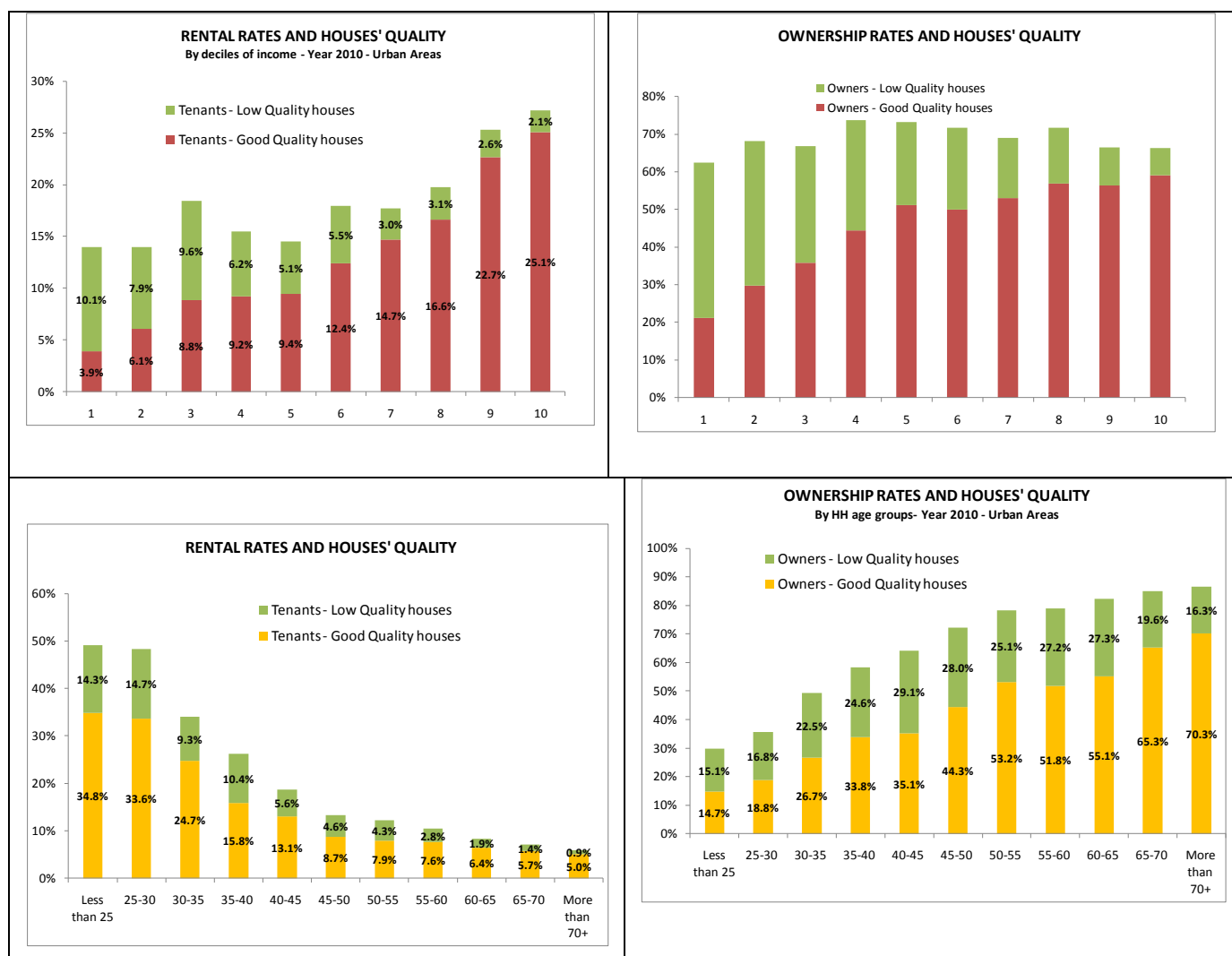
Using this categorization, around one third of owners live in houses of low quality, and the other two-thirds in relatively good ones. Some 70 percent of tenants rent units of good quality. On average, rented houses show better quality indicators than owned houses.

Figure 2.



However, more interesting is when the analysis is carried out looking at differences in households' characteristics. In fact, house quality increases with family income and with the household head's age. However, it must be noted that, although ownership rates do not change much along income deciles, 72 percent of houses in the first decile are considered to be of bad quality, whereas that share falls systematically until representing no more than 8 percent in the upper income group. This is the trade-off mentioned between quality and ownership.

Figure 3. Tenure Condition and House Quality, 2010



Finally, consider those households renting a home of bad quality. They represent one third of all tenants and 5.5 percent of households in urban area. This figure might be the upper bound for those renting with no contracts or illegally, given that there is no reliable information on tenants in that situation. We assume that deteriorated units are prone to be rented by informal workers, including newcomers.¹² It must be noted that 44 percent of workers (about 6 million) are informal, that is, they neither make social security contributions nor pay taxes.¹³

Table 6. Households Renting Low Quality Houses

	% Total	% Renters	#
BA city	7.1%	26.8%	83.1
Greater BA	5.4%	41.2%	160.6
Cordoba & La Pampa	6.8%	24.3%	36.5
S. Fe & E. Rios	3.6%	19.1%	25.7
Rest of BA	4.1%	19.6%	26.6
Jujuy, Salta & Tuc.	7.5%	38.2%	33.1
La Rioja, Catam. & S. del Estero	3.4%	31.8%	6.7
Misiones & Corrientes	4.8%	28.3%	9.0
Chaco & Formosa	2.5%	20.7%	4.2
S. Juan, Mend. & San Luis	6.6%	32.4%	29.2
Neuquen & Rio Negro	3.6%	17.8%	3.9
Chubut, S. Cruz & T. Fuego	7.5%	28.7%	11.5
All regions	5.5%	30.0%	430.1

Source: Author's calculations based on EPH 2010 4 Q.

¹² As noted in Section

6. Legal and Regulatory Framework, households are generally required to demonstrate incomes, so informal workers are the most affected in their ability to sign formal contracts.

¹³ Author's estimates from the EPH 2010 4Q.

3. The Rental Market: A Deeper Look

3.1 Who Are Tenants?

The typical household head who rents his home is a young working male, with above average formal education, and his family is composed of relatively few members.

In fact, the average age for tenants is 40 years old, 11 years below the total urban average. Also, among household heads who are tenants, 65 percent are men, 84 percent are active in the labor market—16 percent are retired or out of the labor market—and 4 percent are unemployed. Also, more than 34 percent of single heads rent, while only 17 percent of married heads do.

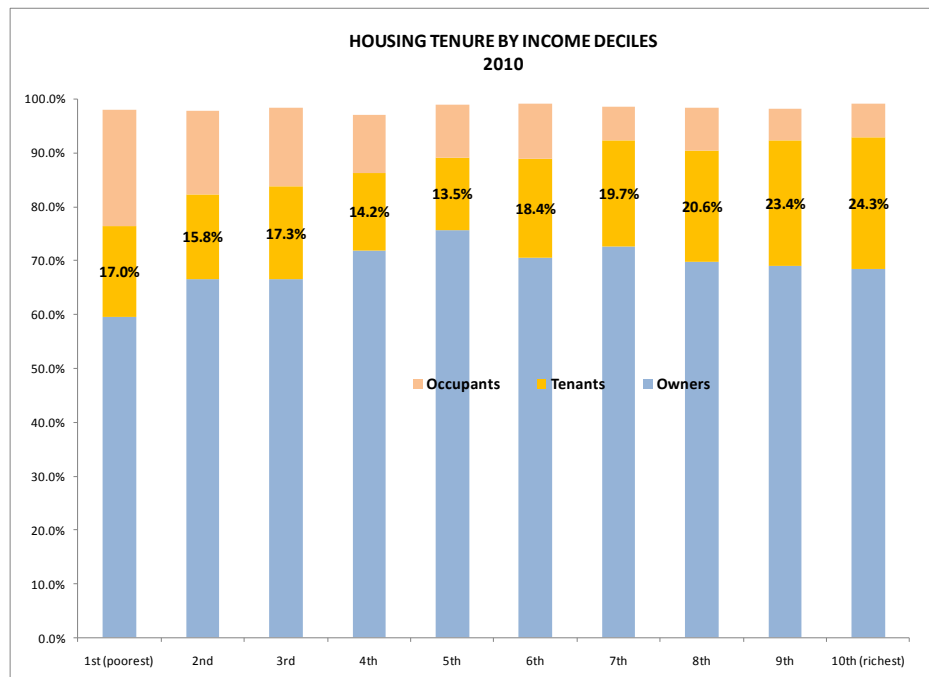
Table 7. Household Heads' Characteristics by Tenure Condition, 2010

	Owners	Tenants	Occupants	Others	Total
Households	5,357,266	1,431,749	850,631	127,156	7,766,802
<i>% of total households</i>	<i>69.0</i>	<i>18.4</i>	<i>11.0</i>	<i>1.6</i>	<i>100.0</i>
Age (# years)	54	40	45	51	51
% under 30 years old	4.8	26.4	15.2	8.1	10.0
Years of Education		12.5			10.8
	10.5		9.5	11.0	
Household total income (\$)	4,554.9	4,263.9	3,097.3		4,313.9
				2,860.4	
Household income per capita	1,655.0	1,972.9	1,203.9		1,658.8
				1,322.0	
Unemployed (% of workers)	3.7	3.9			4.0
			6.0	5.7	
Workers (% total)	66.4	83.8			71.0
			77.0	79.1	
Male (% of total)	64.8	64.7			64.9
			67.3	55.6	
Married (% of total)	61.8	56.3			60.4
			59.9	48.9	
Household members	2.75	2.16			2.60
			2.57	2.16	

Source: Author's calculations based on EPH 2010.

Distribution of tenants across income deciles shows that renting is more usual among high earners.¹⁴ In fact, 24 percent of households in the tenth decile are renters, and 23 percent in the ninth, whereas only 16 percent in the second decile and 17 percent in the first decile (the poorest) rent their houses. Remarkably, middle-income families are renters in the main urban areas, while ownership is pervasive in middle-size cities and in rural areas.

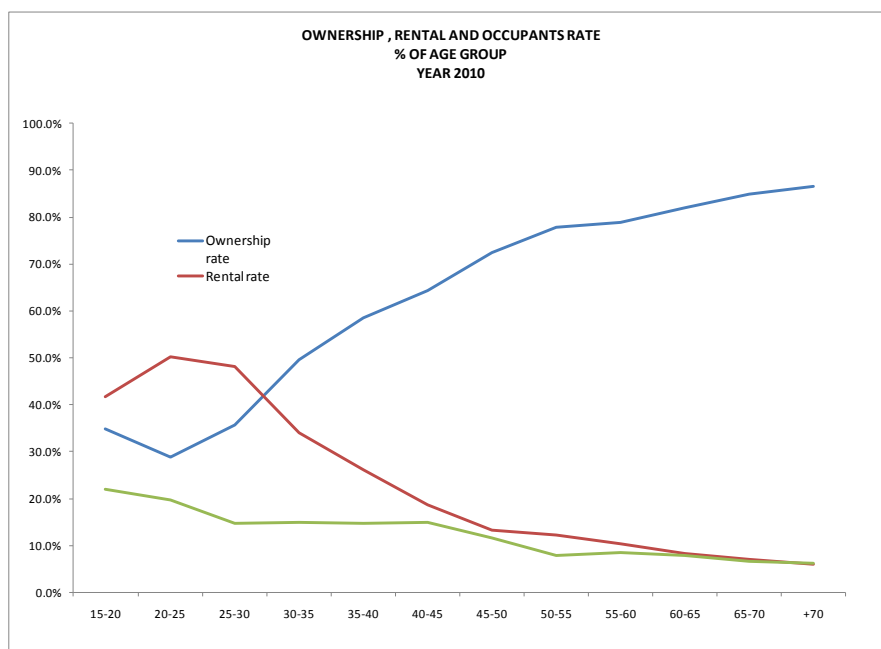
Figure 4.



The increase in ownership rates with age is mirrored by a decrease in rental rates. Among younger household heads (20 to 25 years old), the share of renters reaches 50 percent, declining successively to only 6 percent for household heads more than 70 years old.

¹⁴ Although, as mentioned before, when controlled by age, level of education, and other determinants, income does not matter to households' tenure choice.

Figure 5.



3.2 Where Do They Live?

The geographical distribution of tenants is disparate. Higher rental ratios are found in the urban areas of Rio Gallegos (37.3 percent), Rio Cuarto (29.5 percent), Greater Cordoba (28.1 percent) and Buenos Aires city (26.4 percent), whereas lower percentages of tenants are in Santiago del Estero (7.7 percent) and Formosa, with 11.6 percent. (See Annex 2.2. Tenure Conditions in Urban Areas).

By type of units, 42 percent of tenants rent detached houses, 53 percent rent apartments and the remaining 5 percent live in rented rooms and in other type of houses. These figures imply that 11.3 percent of detached houses and 32 percent of apartments are rented.

3.3 How Much Do They Pay for Rents?

To analyze the rental costs and how much they represent in the family's income, we intensively used the last publicly available National Expenditure Survey, conducted in 1997. Only some general information is publicly available from the most recent survey in 2003, but not at the household level.

The 1997 Survey covered 8.14 million of households, 70 percent of them owners and 13 percent tenants. While ownership rates are distributed more or less evenly across different regions and provinces, contrary, rental rates are correlated with city size and population density. For instance, Buenos Aires city registered the highest rental ratio (24 percent), and the lowest ratios are found in the provinces of La Rioja, Catamarca and Santiago del Estero (6.6 percent).

On average, rents represented 25 percent of tenants' family income in 1997. The lowest rental ratio (rents to household's total income) was registered in the provinces of Chubut, Santa Cruz and Tierra del Fuego (21.1 percent). On the other hand, the highest ratio (28 percent) is in Greater Buenos Aires.

Due to the lack of updated and systematic information of rents, other proxy variables have been used to adjust values of 1997 up to 2010. The variables are CPI rents, the Construction Cost Index (CCI)—both calculated by INDEC—and property prices.¹⁵

In the following table the columns show rental ratios as percentage of household incomes in 1997 (surveyed by the ENG) and for the different adjustments, respectively.

Although one might expect the results to be about the same, striking differences appear. In fact, between 1997 and 2010 the country average for CPI rents grew by 96 percent, the construction cost index 327 percent and property prices by 443 percent. By comparison, in the same period the aggregate consumption deflator increased by 183 percent and households' total income by 279 percent (average for the country).

Compared to 1997, rents adjusted by CPI Rents imply that the rental ratio fell by half in 2010. *This result seems implausible when compared to the CCI.* On the contrary, when the other two *proxy* variables are used, rental ratios show increases between 3 and 11 percentage points. With the exception of the southern provinces (Chubut, Santa Cruz and Tierra del Fuego), a rise in all jurisdictions is observed. Buenos Aires city (growth between 9.8 and 19.5 percentage points) presents the greatest increase, which is indicative of the demand pressure on the rental market. Moreover, the group of provinces in the northwest (La Rioja, Catamarca and Santiago

¹⁵ Using each proxy implies different assumptions about the housing market behavior. Particularly, using the CCI carries out the assumption of a completely elastic long-term supply of houses, that is, land availability does not represent a binding constraint to supplying additional units. Additionally, using property prices as proxy for rents implies that user costs of homeownership remain constant during the period. Otherwise, the price-to-rent ratio should change accordingly, and the relationship is far from been stable. See for instance Poterba (1984) and Himmelberg, Mayer and Sinai (2005).

del Estero) also shows a remarkable increase by 5-14 percentage points, as do provinces in the northeast (Misiones and Corrientes), with increases between 3 and 11 percentage points.

Table 8. Rents as a Share of Household Income, 1996-97 and 2010

	1997-96 ENGH	2010 H1 (*)	2010 H2 (*)	2010 H3 (*)
Buenos Aires city	25.0			
Greater Buenos Aires		15.9	34.8	44.5
Córdoba and La Pampa	28.0	13.6	29.8	39.9
Santa Fe and Entre Ríos	22.3	9.8	21.4	26.2
Rest of Prov. Buenos Aires	25.4	11.4	25.0	30.0
Jujuy, Salta and Tucumán	26.4	12.7	27.8	36.3
La Rioja, Catamarca and Sgo del Estero	23.6	10.8	23.7	30.9
Misiones and Corrientes	23.1	12.9	28.1	36.6
Chaco and Formosa	24.1	12.4	27.1	35.3
San Juan, Mendoza and San Luis	20.4	10.4	22.7	29.6
Neuquén and Río Negro	24.7	11.9	26.0	28.1
Chubut, Santa Cruz and T. del Fuego	24.0	10.5	22.9	29.9
	21.1	8.2	17.9	19.4
All regions				
	25.2	13.0	28.4	36.2

Source: See main text.

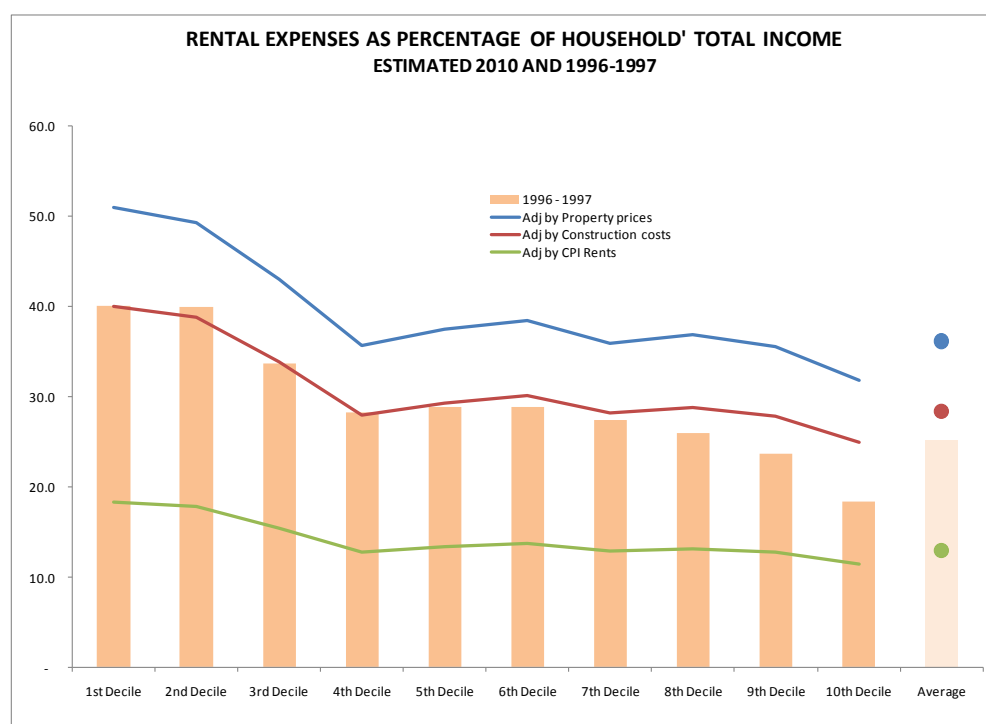
Notes: (*) 2010 H1 adjusted rents from 1997 to 2010 using CPI Rents, 2010 H2 using the Construction Cost Index and 2010 H3 using property prices surveyed by realtors and other sources.

As expected, the percentage of income spent by tenants on rents increases as the family's income declines. The figure below shows that, compared to the year 1997, in 2010 tenants paid 12 percentage points less from their income (if rents grew as CPI Rents did), and this improvement is across the board. However, other results are found instead when other proxy variables are used. Thus, if rents evolved *pari passu* to the construction cost index, tenants are paying on average slightly more (3 percentage points) than in the base period. If the adjustment is made using property prices, renters would be paying 11 percentage points more than in 1997, reaching a rental ratio of 36 percent.

Interestingly, different impacts emerge as changes in relative prices between rents and households' income favored poorer families. The figure shows that rents adjusted by the CCI implied that families in the four first deciles saw their rental ratios decrease, while those in the last deciles saw them increase significantly. The simulated rents using property prices imply the same pattern although without reductions in rental ratios, but with more significant growth in the upper income groups.

It is important to note that rents adjusted by property prices for the Buenos Aires city are 11 to 47 percent *lower than actual rents* surveyed by the local Government, depending on the decile compared, and they are highly variable across neighborhoods (See Annex 3.1.Methodology to Estimate Rental Values for 2010). This means that our hypothesis probably represents a *lower bound*.

Figure 6.



Since 2003 the recovery in employment and wages has produced faster growth in the household incomes of the bottom deciles. This helps to explain the better performance of rental ratios for low income deciles compared to those at the top of the distribution. Annex 2.3. Rental Values by Agglomerates shows that average total income for a family in the first decile increased

327 percent between 1997 and 2010, whereas for the entire population this growth was 279 percent in the same period.

Also, changes in relative prices since 2002, favorable to tradable versus non-tradable goods, provoked a spur in activities located in rural areas, where agricultural production consequently expanded. Incomes grew faster in less populated cities, where agriculture and related services are located, than in large densely populated areas. In this manner, total household income in Buenos Aires city and in Greater Buenos Aires grew at slower pace than in other areas such as Cordoba-La Pampa and Santa Fe-Entre Rios.

The following table shows changes in rental ratios by income quintiles between 1997 and 2010. In this table rents were adjusted by CCI growth.¹⁶ It can be seen that households in the fifth quintile experienced a worsening of their situation relative to 1997, given that their rental ratios increased or decreased less than the average (marked in bold). At the other extreme of the distribution, poorer families improved their ratios in eight out of 12 regions. On average, as mentioned, the poor were favored by the change in relative prices between incomes and rents. The opposite happened with richer families.

Table 9. Changes in Rental Ratios by Income Groups 1997-2010 (*)
in Percentage Points

	1st Quintile	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile	Total
Buenos Aires city	(2.2)	5.9	8.4	6.3	14.3	9.8
Greater Buenos Aires	(0.1)	(1.5)	(0.8)	1.3	4.1	1.8
Córdoba and La Pampa	(2.9)	(5.6)	(3.1)	(2.0)	1.1	(0.9)
Santa Fe and Entre Ríos	1.1	(2.0)	(0.4)	(2.4)	0.7	(0.4)
Rest of Prov. of Buenos Aires	2.0	(2.2)	(2.9)	(0.0)	3.9	1.4
Jujuy, Salta and Tucumán	(4.3)	(5.3)	(1.2)	(1.9)	3.4	0.1
La Rioja, Cat. and S. del Estero	1.8	3.2	3.3	2.8	8.1	5.0
Misiones and Corrientes	(2.6)	1.8	(2.3)	1.7	6.4	3.0
Chaco and Formosa	2.6	(0.9)	(3.3)	0.9	5.2	2.3
San Juan, Mendoza and San Luis	(8.7)	(4.6)	(2.3)	0.8	4.9	1.3
Neuquén and Río Negro	2.0	(7.6)	(6.7)	(4.5)	3.6	(1.1)
Chubut, S.Cruz and T. del Fuego	(15.4)	(6.6)	(7.1)	(4.1)	(0.4)	(3.2)
All regions	(0.6)	(0.2)	0.9	1.9	5.8	3.2

(*) Assuming that rents evolved at the same rate as the Construction Cost Index.

¹⁶ This can be considered as an intermediate scenario with the lower bound the result of the adjustment by the CPI Rents and the upper bound that by the property prices.

3.4 *Owning versus Renting*

In this section two approaches are followed to evaluate whether house prices are over or undervalued relative to rents. The first estimates the imputed rent to owners to compare with effective rents in the market. If imputed rents results turn out to be lower than effective rents, one can state that owning is more affordable than renting and tenants could be better off changing their tenure condition. The second approach compares the estimated rental yield (rents-to-prices) with those observed in other countries. Comparatively a high rental yield, for instance, implies that in the country being a tenant is expensive *vis-à-vis* the rest of the world and *vice versa*.

3.4.1 *Imputed Rent to Owners*

The following table illustrates the long-term evolution of property prices and rents. It can be observed that in real terms house prices grew 3.4-3.7 percent annually if deflated by CPI and 4.5-4.9 percent if deflated by the Wholesale Price Index (WPI), depending on whether a new or used house is taken, respectively. In US dollars, properties appreciated 9.3 percent annually. Note the strong growth of house prices during 1977-1980 and the dramatic fall during the crisis of 2001-2002. During the last eight years considered here property prices grew faster than the historical average.¹⁷

On the other side, CPI housing (which includes rents and other expenses such as utilities bills and maintenance disbursements) tends to keep up with the inflation rate (measured by CPI). For the shorter sample period of CPI Rents, it can be observed that rents grew in real terms in the 1990s and remained constant during the 2000s.

¹⁷ In comparison, the Case-Shiller index of house prices in the USA grew in real terms at an annual rate of 0.4% over the period 1891 to 2010. (See <http://www.econ.yale.edu/~shiller/data.htm>)

Table 10. Property Prices and Rents in the Long Term, Average Annual Growth

	1977-2011	1977-1980	1980-1990	1991-2000	2001-2002	2003-2010
Property prices per sq meter						
New- In US\$	9.3%	51.0%	2.2%	9.8%	-26.6%	15.6%
Used - In US\$	9.3%	52.4%	1.5%	9.6%	-30.8%	16.6%
New- Def. by CPI	3.7%	3.1%	1.0%	-0.4%	12.9%	9.0%
Used - Def. by CPI	3.4%	3.6%	0.5%	-0.5%	4.6%	9.8%
New- Def. by WPI	4.9%	13.7%	1.5%	6.9%	-4.8%	7.0%
Used - Def. by WPI	4.5%	13.8%	0.6%	6.6%	-11.2%	7.8%
Rents						
CPI Rents def. by CPI (*)		n.d.	n.d.	19.4%	-10.0%	0.6%
9.3%						
CPI Housing def. by CPI	0.2%	-0.1%	-1.0%	3.8%	-7.0%	-1.0%
Others						
Inflation rate	375.1%	150.1%	1085.6%	666.2%	12.4%	9.2%
Currency Depreciation	418.6%	71.3%	1242.0%	679.1%	107.2%	4.2%

Source: Author's calculations based on information from real estate brokers, INDEC and BCRA. (*) Since 1990. See Annex 3.2. Methodology to Estimate User Cost for Owners for further information.

Does this mean that purchasing a house was cheaper during the 1990s than renting, given that property prices grew slower than rents? Can the opposite be said for recent years?

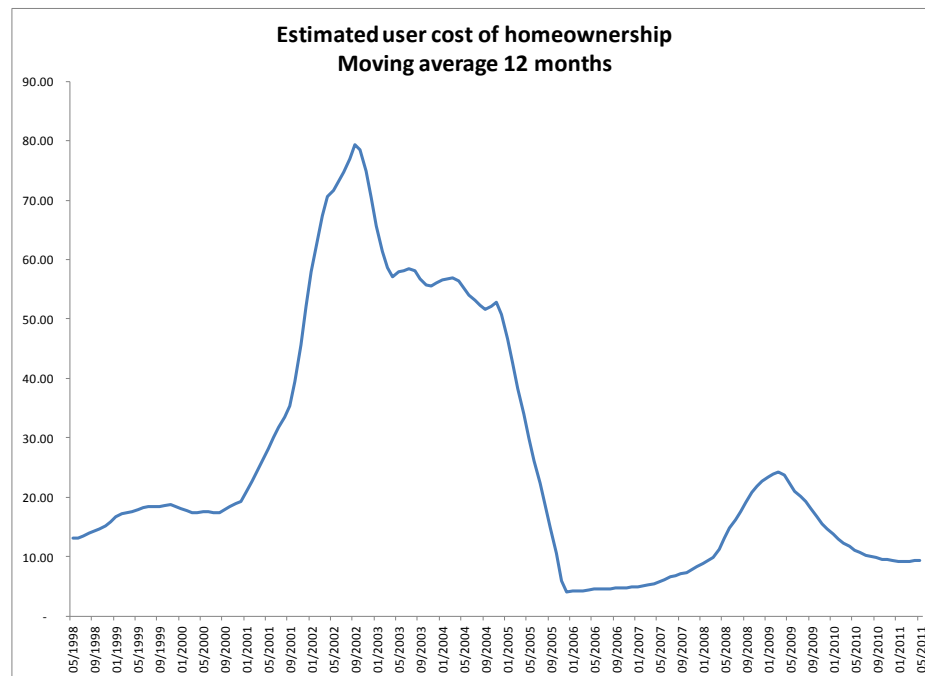
As remarked by Himmelberg, Mayer and Sinai (2005), the price of a house is not the same as the annual cost of owning. Thus, high price-to-rent ratios do not necessarily mean that owning is costlier than renting. Converting the value of the stock (the house) into a flow is only the first step toward making both measures comparable. Additionally, other variables affecting the decision to purchase a house must be considered.

Here we will follow the methodology of Himmelberg et al., which is an adaptation of Poterba (1984), to estimate the cost of homeownership. The formula for the annual cost of homeownership is the sum of six components. The first four items increase the annual cost, and the last two tend to reduce it: i) cost of foregone interest that the homeowner could have earned by investing in some other asset; ii) annual cost of property taxes; iii) maintenance or depreciation costs; iv) the additional risk premium to compensate homeowners for the relative risk compared to renting; v) tax deductibility of mortgage interests on income taxes; and vi) the expected capital gain during the year.¹⁸

¹⁸ See Annex 3.2. Methodology to Estimate User Cost for Owners for further details and the sources of data used.

The following chart shows the user cost of homeownership since 1997. As can be seen, this variable is highly volatile, depending on the changes in the opportunity cost of funds.¹⁹ However, it can be observed that ownership is currently cheaper than in any month before 2006, including the period 1997-2000 when the mortgage market was more active. The main reason for this result is the low real interest rate observed in recent years.

Figure 7.



This user cost can be compared to the rental yields, for instance, the 6.8 percent used in the following section. Owning a property had an opportunity cost of 10.8 percent in 2010. This means that renting was actually cheaper than buying a house unless our assumptions were not correct. In this sense, if expected property price growth is higher than our supposed 3.45 percent, for instance 7.4 percent annually, the user cost would be exactly 6.8 percent, the same as our estimated rental yield.²⁰ Our figure would also be rendered erroneous by an opportunity cost 4.4

¹⁹ Idem.

²⁰ Own estimates of rental yields using data published by CEDEM are around 6 percent, not far from the Global Property Guide estimate.

percentage points lower than our 9.2 percent assumption, which makes the user cost equal to the rental yield.²¹

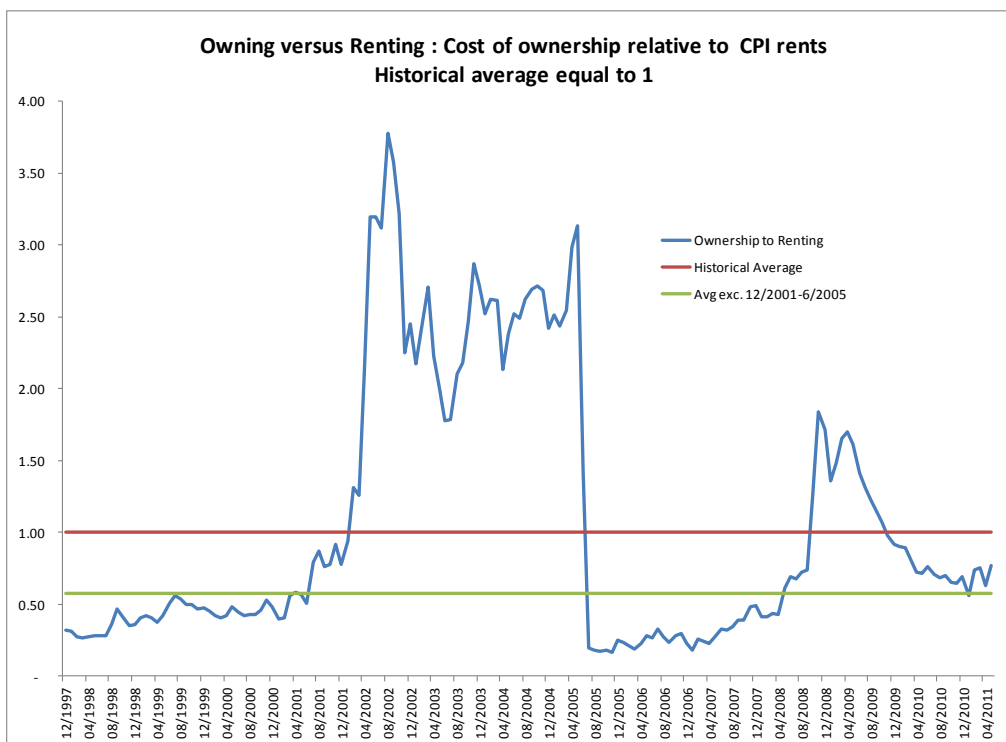
To sum up, the opportunity cost for the owner could be lower than assumed but, more importantly, owners—including investors—could be expecting faster property appreciation than the historic value of 3.45 percent.

We can also find out whether owners are better off than tenants by comparing the cost of ownership (user cost times the property prices) to that of renting (measured by CPI rents). This ratio indicates that being an owner during the period 2002-2005 was by far costlier than being a tenant compared to the historical average. However, after 2005 purchasing a property was more convenient than renting, again relative to this long run average. Except for a couple of periods during the international financial crisis, the last years the same favorable situation for owning was observed. Note, however, that after the last financial crisis, the ratio tripled in relation to those observed before 2008. Finally, owning a property has become much more expensive today than in the 1990s.

All these figures imply that tenants today are better off in relative terms than in the 1990s, and better off than during the years prior to the financial crisis. This seems to support the evidence that house prices are unaffordable and push families to rent, although the new supply from investors keeps rental values growing slower than house prices.

²¹ Recall that our hypothesis implies that investors can buy a portfolio of sovereign bonds composed by those included in the indicator EMBI Argentina and the 10-year US Treasury bond. This can be a little sophisticated for the average investor. It must be noted that there are not deposits in the domestic financial system with terms longer than a few months to use as the relevant benchmark return of a long-term investment.

Figure 8.



3.4.2 International Comparison of Rental Yields

Using data from other countries could also help us to understand the current situation of tenants.²² Compared to other cities, *Buenos Aires seems to be cheap to buy and relatively expensive to rent*, given the estimated rental yield of 6.8 percent for a typical 120-square meter apartment. However, considering Latin American countries, *Buenos Aires presents the third-lowest rental yield in a region of comparatively high yields*.²³

²² See Annex 3.3. Source for Rental Yields in the International Comparison.

²³ This result seems more consistent with those found in the previous section. Recall that currently the relative cost of ownership is higher than two years ago (that is, renting is cheaper), and it is similar to the average excluding 12/2001-6/2005.

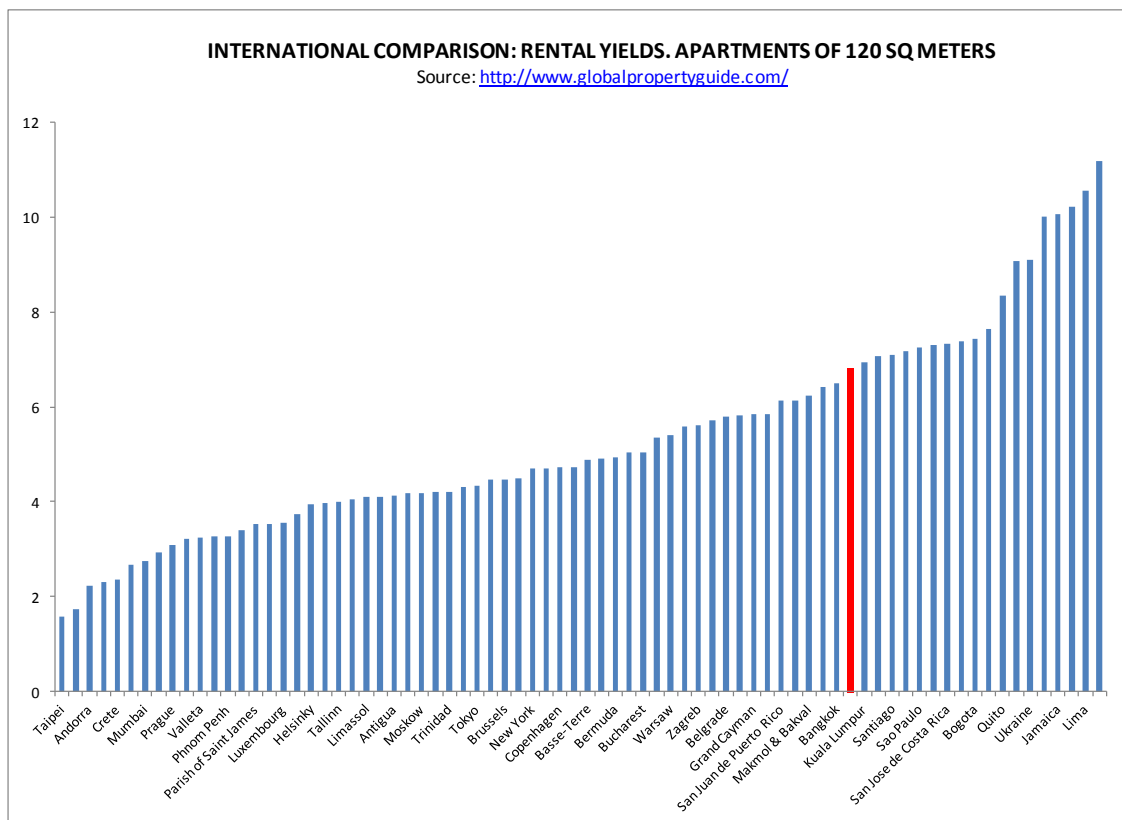
Table 11. Rental Yields

Region	Rental Yield (%)
Asia	4.7
Caribbean	5.3
European countries	4.7
North America	5.0
Pacific	5.0
Latin America	7.8
<i>Buenos Aires</i>	<i>6.8</i>

Source: Based on www.globalpropertyguide.com, simple average of cities included in the regions.

To sum up, the capital of Argentina presents a relatively expensive rental values compared to the rest of the world but not compared to the rest of the region. That is, Argentine tenants are paying higher rents than the world average but not more than their regional neighbors. This fact is consistent with the higher opportunity cost of funds for Argentina, and for the region, compared to the rest of the world.

Figure 9.



3.5 Who Are the Landlords?

Although the number of tenants is over a million, only slightly more than 180 thousand households report receiving income from houses rented.²⁴ At least three reasons can help to explain this inconsistency: i) on average, landlords have more than one property; ii) the survey does not include real estate companies, which are relevant to these figures; and iii) households are reluctant to declare their true sources of income. Weighing the different reasons, we suspect the latter has a major role in this result.

However, some stylized facts can still be observed from this sample:

- These rent receivers increase their participation with the income decile groups. At the bottom, only 0.3 percent of families reported income from this source and, at the top of the distribution, 7.4 percent received housing rents as income.
- Rent receivers are concentrated in older age groups. In fact, 52 percent of them are persons above 60 years old, and 74 percent are above 50 years old. This characteristic is the consequence of purchasing houses as the preferred asset class for small investors along their lifecycle. In fact, traditionally housing has been the preferred instruments for savers to protect their savings from inflation and eventual violations of property rights.²⁵ Additionally, more than half of rent receivers are retired from the labor market.

4. Supply of Houses: New Units and Main Constraints

4.1 Flow of Units Incorporated into the Market

Approximately 210,000 households were formed annually between the last censuses. If the deteriorated houses that cannot be repaired are added, the total number of units needed to keep each new family in their own home—whether purchased, rented or otherwise occupied—is 274,000 yearly.²⁶

The number of new units supplied annually, however, is only 177,000 a year, 74 percent of them for renting. Net balance, supply minus potential demand, implied a deficit of 97,000

²⁴ The question included in the EPH is: Do you receive incomes from property rents?

²⁵ Properties in Argentina are considered safe assets, insulated from macroeconomic instability and inflationary environments.

²⁶ We assume that 0.5 percent of the stock is deteriorated annually. This parameter was also used by Angel (2001).

households that annually have to share shelter with others. If only occupied houses are considered, the deficit would grow to 117,000 families.

Table 12. Annual Flows between 2001 and 2010, in Thousands

	Annual Flows	%
Households (1)	210	76.4%
Houses out of the market (*) (2)	65	23.6%
Total new units needed (3) = (1)+(2)	274	100.0%
New houses supplied (4) (**)	177	
For rent	131	74.1%
Deficit in flows (4) –(3)	-97	

Source: Author's calculations based on 2001 and 2010 Censuses and EPH 2010 4 Q.

(*) Equivalent to 0.5% of the stock of houses. (**) Occupied and unoccupied houses.

What are the main constraints on the supply of new units to the market? Particularly, are there problems in incorporating new units into the rental market? These questions will be analyzed in the following subsections.

4.2 Main Constraints

4.2.1 Real Estate Developers

There is a large number and variety of real estate developers in Argentina, with firms of different sizes and technologies ranging from family enterprises and small builders to larger and more sophisticated. Many of the small firms work as independent contractors, providing their own projects, and also as service providers to larger firms. Recently, a group of high-tech expensive dwelling developers have been very active in the market, particularly in the construction of suburban neighborhoods, developing projects in selected locations in Buenos Aires, Rosario, and Córdoba. Most of these new developers focused on high-income demand.

As of July 2011, the number of formal companies reached 19,800. The value chain is composed of approximately 12,000 construction companies, 5,700 contractors and 2,100 subcontractors. Sixty eight percent of them are active in the largest urban centers (city and province of Buenos Aires, Cordoba and Santa Fe). Small companies dominate activity, representing 75 percent of firms in number and employing 20 percent of the workforce (with an

average of 3 workers per company). At the other extreme, 2 percent of the companies are large ones with more than 100 workers, and they employ around 30 percent of the total. In the middle, 22 percent of the companies are medium ones between 10 and 100 workers, accounting for half of employment. The activity is labor intensive, and labor informality used to be very high. In recent years, the degree of formality has increased along with employment in the sector.

Their activities also include other types of construction, from public infrastructure to housing. Large companies mostly concentrate on public infrastructure or commercial construction. Smaller companies and a number of developers specialize in apartment buildings or suburban gated communities. Detached houses are built by independent builders (architects, civil engineers, etc.).

Two sources of financing are used by developers. The first is using company equity, which finances at least the start-up of projects. The second source is from selling the units to individual investors/buyers in advance of finishing construction. This second source of funds is generally earmarked to a private trust fund (a.k.a. fidecomiso), and it is the most common type of funding available to small investors and young families to purchase houses.

4.2.2 Construction Costs and the Supply of the Main Building Material Inputs

Housing in Argentina reflects the population's largely Italian and Spanish ethnic background. Except for marginal rural dwellings and urban shanty towns, concrete, mortar, and brick are favored as the most important construction materials.²⁷

As expected, construction costs are linked to housing prices and rents. As illustrated in the figure, the property prices to construction costs ratio shows three stages over the last 30 years, each corresponding to different macroeconomic environments.

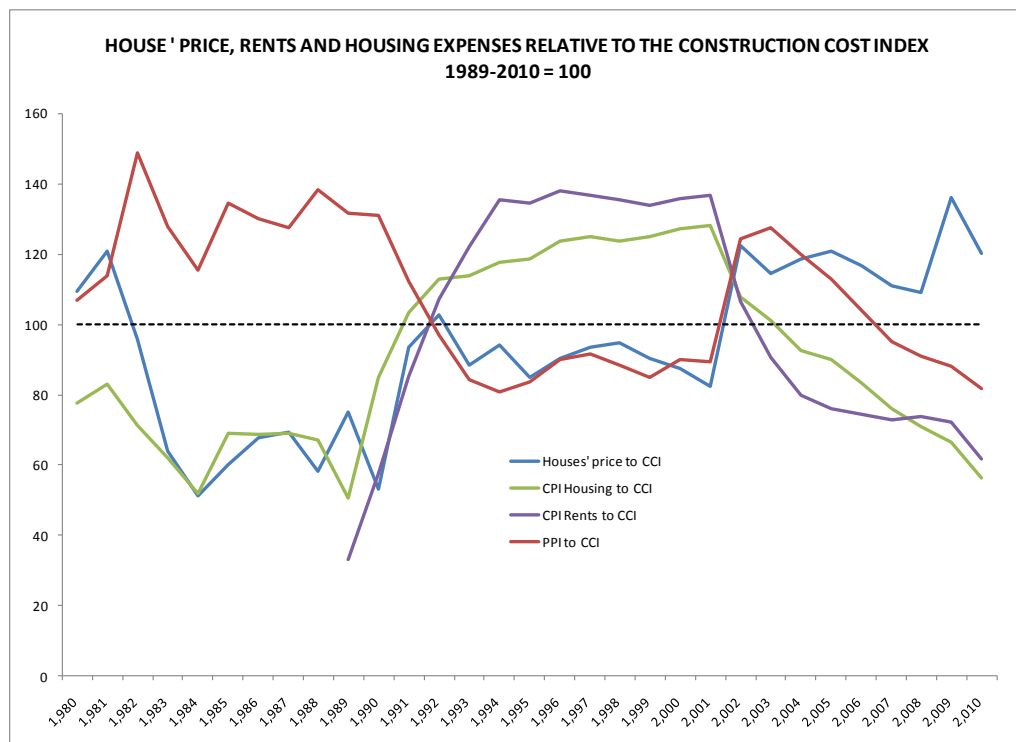
In the 1980s Argentina shared with the rest of the Latin American countries a period of high indebtedness, stagnant economic activity, rampant inflation and declining GDP per capita. Additionally, the absence of credit markets, particularly for long-term financing, depressed housing investment. The housing price to construction cost ratio reflects the relative low profitability of the industry.

²⁷ To have an idea of the composition of these costs, take for instance the Construction Costs Index (CCI). The INDEC estimates the CCI based on a set of six different types of houses, including apartments and houses of different qualities. In 1993, the index's base year, the composition was 46 percent materials, 45.6 percent labor services and 8.4 percent general expenses. Today, taking only the increases of each component costs, the composition would be 40.8 percent, 51.7 percent and 7.5 percent, respectively.

Over the following decade, in middle of an important process of reforms, including the development of a mortgage market, the demand for new houses increased, raising the ratio of prices to costs. However, the third period, which began after the 2001-2002 crisis, boosted the demand for houses as safe havens, pushing their prices up relative building costs. Remarkably, this process occurs even when the mortgage loan market is practically nonexistent (see Auguste, Bebczuk and Moya, 2011).

Finally, note that construction costs keep their relative position related to wholesale prices (tradables) in the long run. Being mostly a basket of non-tradable inputs, they were relatively low in the 1990s and adjusted downward in the early 2000s.

Figure 10.



The three main components of the construction cost index tend to move closely to the average during times of relatively macroeconomic stability (1992-2001). High inflationary contexts, including two hyperinflations in 1989 and 1990, weighed against labor costs and favored the relative price of materials. The same story can be found after end-2001 when the peso suddenly depreciated by 300 percent in only a few months (the peso went from 1\$ to 4\$ per

dollar from December 2001 to June 2002). The component of materials, with some share of tradable goods, jumped above the rest of components. The subsequent recovery after 2003, with a strong growth in real wages, steadily increased the contribution of labor costs to the general index.

In absolute terms, the Government of Buenos Aires estimated that construction costs per square meter reached US\$ 516 in 2008. Using the evolution of the ICC since then, construction costs would have reached to US\$ 717 in 2011. Other sources such as the specialized magazine *Vivienda* calculate current costs as much as US\$ 920 (AR \$ 3.914) per square meter in October 2011.²⁸ In both cases the cost of land is not included.

According to the SSDUV, costs per square meter of houses provided through FONAVI or PF are lower than these estimated for Buenos Aires city, even including the cost of land. Annex 4.3. Construction Costs for State Housing Programs, shows that these range from US\$ 214 (PF, Emergencia Habitacional) to US\$ 722 (FONAVI, Free Demand) in 2009. Nonetheless, it must be recalled that costs are estimated using historical values in a context of two-digit inflation and sometimes at highly subsidized land value, which makes these costs non-market figures.

Regarding the cost of land, values vary according widely in the capital of Argentina: from US\$ 480 per square meter in the cheapest area (La Boca) to US\$ 2,100 in the most expensive areas in the northern city.²⁹

²⁸ *Vivienda: La revista de la Construcción*. October 2011. Number 591. Buenos Aires, Argentina.

²⁹ In the rest of the country, values are also highly variable. Unfortunately, there is no systematic source of information on either land prices or costs of construction. A few kilometers from the capital, the cost of land falls as far as less than US\$ 50 per square meter. (There is no reference for the latter, but can be found looking at a real estate web site like www.buscainmuele.com.ar in municipalities such as Florencio Varela or Moreno).

Figure 11.

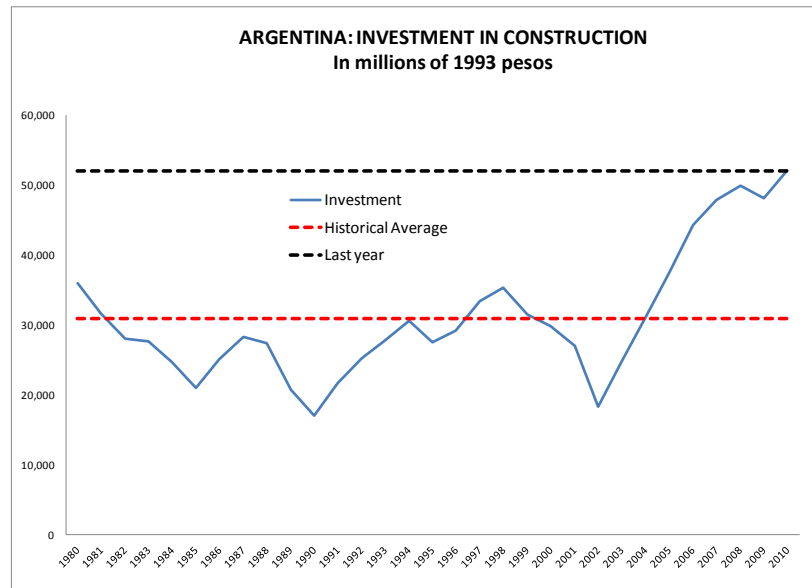


Source: Based on CEDEM and author's estimates. See Annex 4.2. Construction Costs in Buenos Aires City.

4.2.3 Markets for Inputs for the Construction Industry

Markets for inputs used in the construction industry are fairly competitive, and most producers are close to reaching their full capacity utilization. In fact, strong demand in recent years from the construction industry, at historical record levels, has provoked increasing imports of inputs to complete the domestic supply.

Figure 12.



The main inputs used in construction also reached their highest levels ever in 2010. Some of them, however attained their highest capacity some years before, with imported inputs being substituted to meet market needs. This was the case for ceramic tiles and other floorings, iron rods used with concrete (rebar) and asphalt.

Note that other indicators compiled by INDEC, such as that of production of houses (based on inputs), also reached historical records.

Table 13. Inputs Used in the Construction Industry and Indicators of Construction Activity

	Average				Maximum		
	1993-2010	1993-2000	2001-2002	2003-2010	Value	Year	% to Avg. 1993-2010
ISAC Houses (2004 = 100)					177	2010	58%
	112	97	90	136			
ISAC Total (2004=100)	110				168	2010	53%
		96	89	133			
Concrete deliveries ('000 tons)	6,960	6,215	5,833	8,264	10,423	2010	50%
Paint (Tons)	148,612	138,590	140,312	166,671	175,172	2010	18%
Ceramic and others('000 m2)	32,340	32,941	28,181	34,074	37,912	2007	17%
Iron rods ('000 tns)	483	434		579	785	2008	63%
			405				
Asphalt (1) ('000 tns)		588		622	826	1997	43%
	577		464				
Brick (2) (MM units)						2010	51%
	291	200	192	335	440		

Source: Author's calculations based on INDEC data.

The domestic production of materials used in likewise reached historically high levels. None of them seems to present bottlenecks to prevent the expansion of the investment in construction.

Finally, it must be mentioned that some years ago, the Argentine antitrust agency imposed sanctions on the members of the cement association on charges of acting as a cartel, setting prices and distributing market quotas. Since then, no other sanctions have been applied to inputs producers.³⁰

³⁰ Case CNDC vs. Loma Negra C.I.A.S.A., Cementos Avellaneda S.A., Cemento San Martín S.A., Juan Minetti S.A., Petroquímica Comodoro Rivadavia S.A. y la Asociación de Fabricantes de Cemento Portland (AFCP). July 2005. (See <http://www.cndc.gov.ar/archivos/cemento.pdf>).

4.2.4 Laws Governing the Use of Land

There is no single law at the national level regulating land use and zoning. On the contrary, there is a great disparity in the reach and application of these principles among provinces and municipalities.

In fact, the existing legislation is dispersed among laws, decrees and ordinances enacted at provincial and municipal levels. In general, land regulation comprises land-planning laws at the provincial level and rules and ordinances at the municipal level.

A nationwide survey of local land use regulation covering 118 municipalities located in 28 urban agglomerates was undertaken in 2009.³¹ Some results indicate the following features mapping out the legal and regulatory framework of land use and zoning:

1. As many as one third of municipalities have some general guidelines from the provincial level, such as provincial laws or plans for land use (for instance, Buenos Aires, Mendoza, Chaco, Santa Fe). Most provinces have granted total autonomy to the municipalities to draft all their land regulatory requirements in their jurisdictions (e.g., Chubut, Corrientes, Formosa, Catamarca, Cordoba, Entre Rios, Santa Cruz, Salta, etc.).
2. However, only 70 percent of municipalities have municipal plans for land use, though most have a set of ordinances to regulate land use.
3. Most jurisdictions have outdated provincial or municipal plans (the average times since last review are 15 and 11.8 years, respectively) and municipal ordinances (12.1 years on average).
4. Projects with zoning change must be approved by the legislative local council or the municipal executive body in most cases. Those projects which do not require zoning changes must deal with cadastre commissions and public works and planning offices.
5. On average, 25 percent of zoned land is zoned for low-density residential use, 12 percent for high-density residential use and 20 percent for mixed uses.

³¹ “Regulación del Uso del Suelo en Municipios Argentinos,” Reporte de Resultados Encuesta Nacional 2009. Proyecto en el Marco del Convenio de Asistencia Técnica entre la Secretaría de Asuntos Municipales del Ministerio del Interior y la Universidad Torcuato Di Tella.

Industrial uses involve 10 percent and rural uses the remaining 31 percent. However, there is a wide dispersion in values.

6. The minimum lot size required in low-density areas is 495 square meters on average (minimum 100 square meters and maximum 2,000 square meters) and 393 square meters in high-density areas (minimum 100 square meters and maximum 1,000 square meters). Larger minimum required sizes imply costlier access for the poorest families.
7. However, not all municipalities have a required minimum size: around 70 percent of them do have it. Moreover, they seem to rely more on FOS (factor of plot occupation) and FOT (factor of total occupation) as instruments to regulate density.
8. Basic infrastructure provided by the municipalities in new projects within the urban perimeter varies greatly among jurisdictions. In decreasing order, they are in charge of cleaning and sweeping (almost 30 percent of municipalities), lighting, paved streets and sanitation and water services. Remarkably, in the province of Buenos Aires, the developer also has to provide basic infrastructure for subdivisions to be approved, and municipalities are in charge of paving streets and lighting, sanitation and sidewalks.
9. Fifty percent of the municipalities can regulate the use of land through public purchase of land for social uses or legal regularization of informal settlements and rural land preservation. Land reserves for social housing, fiscal instruments for added value capture and donations for social housing uses are barely utilized (10 percent of jurisdictions). Fiscal incentives, such as reduced fees for construction projects, are established in 33 percent of the jurisdictions.
10. Several municipalities encourage further urban development through infill within city limits rather than through urban extension and sprawling.
11. A single-family dwelling project takes on average 31 days from the initial presentation to final approval (from 2 days and up to 180 days among different jurisdictions), and a multifamily project, 52 days.

The urban literature has stressed the importance of land regulation for building costs (e.g., Gyourko, Mayer and Sinai, 2006). In developing countries, more stringent regulations not only increase the costs of providing additional supply of houses, given that they reduce the amount of land available, but they also generate a substitution effect towards demand for untitled-informal lots. That is, standards setting a minimum quantity of land can exclude the lowest segment of the market. Moreover, restrictions limiting intensity of land use might affect low-income households, who have a higher demand for high-density developments than do high-income families.

Goytia, de Mendoza and Pasquini (2010) studied the effect of the land regulations across provinces on the housing market in Argentina. They noted that, even when informal tenure became prevalent in various agglomerations in Argentina, regulations did not evolve to take into account instruments to deal with informality.

The authors distinguish between two types of informal land development. The first is the squatter settlement or “villa miseria” resulting from invasions or unauthorized occupations. The second type is accessing to land through informal commercial urbanizations where private plots in the urban peripheries are developed and sold in the market, but they are characterized by not complying with land regulations such as minimum size or served infrastructure.

The authors found that in those jurisdictions with land plans incorporated into their regulatory or legal frameworks, households are more likely to present an informal tenure condition. The same effect is found in municipalities where residential project approval costs are high. For instance, an increase in one standard deviation in the indicator of the former reduces the chances of being formal by 13 percent and in that of the latter by 9 percent.

To sum up, land regulation varies widely in Argentina, generally depending on municipal bodies more than provincial norms. This feature generates enormous differences in costs of supplying additional land that translate into different degrees of informality. Finally, it must be noted that no special treatment is given to some kinds of new construction, including those units for renting.

4.2.5 Access to Urban Land: The Case of Buenos Aires City and Surrounding Areas

Land regulation is decentralized at the provincial level as a consequence of Argentina's federal government structure. In the Province of Buenos Aires, the general guidelines on the matter are at the provincial level although municipalities can rule their ordinances and plans accordingly.

The main law is Decree 8,912, Law of Territorial Ordering and Land Use, enacted in 1977. Among other requirements, the law establishes that: the land subdivision must include basic infrastructure available (water, sewerage, pavement, electricity, lighting, rain drain); the minimum lot size must be 300 square meters; and land plans are set at the municipal level.

The metropolitan area of Buenos Aires is the country's most densely populated region, with a spatial distribution mapping out differences in socioeconomic strata. Also, 51 percent of all the country's households living in slums are concentrated in this region.

This area is comprised of Greater Buenos Aires (GBA), 24 municipalities surrounding the Buenos Aires city where 24 percent of Argentina's population lives. The population density is the second highest, after Buenos Aires city, with 2,394 persons per square kilometer whereas the average for the country is around 13 inhabitants per square km. In contrast, Buenos Aires city, the capital of Argentina, is a 200 square kilometer urban area with 2.9 million inhabitants.

Traditionally, in Argentina's capital, there is a north corridor from the neighborhood of Retiro in the south to the municipality of Tigre in the province of Buenos Aires with the most expensive cost of land. More recently, since the 1990s, some real estate developers have purchased land to urbanize in the north of the province, including land in the municipalities of Tigre, Escobar, San Fernando and Pilar. These urban developments were mainly gated communities directed to sell houses to middle and upper-income households. The 2001-2002 macroeconomic crises brought these projects to a standstill, but after 2005 this trend continued with new urbanization in the area.

In Buenos Aires city, the purchase of land by developers and other investors is concentrated in the southeast for building apartments for sale to families and investors. However, the area is reaching its boundary given the scarcity of vacant lots.

This land scarcity in the city helps to explain why most of new developments have moved to the surrounding municipalities. In 2006, according to official figures, almost 18.5 percent of total usable land in the Greater Buenos Aires was still vacant. Hurlingham, Tres de Febrero, Moreno, San Fernando, Avellaneda and José C. Paz have the highest percentage of

vacant land. However, Pilar with 61 square kilometer accounts for 14 percent of the area's total vacant surface; Moreno (10 percent) and La Matanza (10 percent) are next in the ranking. At the other extreme, Vicente Lopez, San Isidro and San Fernando represent together less than 3 percent of the total vacant area.

Clearly, there exists a negative correlation between the land value, measured by fiscal valuation, and vacant land available. The land value distribution follows the above mentioned segmentation with municipalities in the north (San Isidro, Vicente López and San Fernando) showing the highest values and those located in the south (e.g., Florencio Varela, Ezeiza) and in the west (e.g., José C. Paz, Merlo and Moreno) the lowest.

There also exists a negative correlation between the percentage of vacant lots and the availability of infrastructure (See Annex 4.1. Vacant Land and Infrastructure in the Province of Buenos Aires). Obviously, this is the result of supply and demand interaction: no pavement is offered where no one lives, and no one lives where infrastructure is not supplied. Given the coordination problems that emerge from the private provision of public goods, an important role for municipalities must be encouraged.

Table 14. Vacant Land in Greater Buenos Aires According to the Cadastre, 2006

	Vacant lots		% of the municipality		Fiscal valuation	Lot
	#	Square Mts	% Lots	% Sq Mts	(\$ per Sq Mt)	Average size
Hurlingham	4179	12,073,834	8.7%	43.3%	5.18	2,889
Tres de Febrero	3681	10,164,449	3.3%	32.9%	12.51	2,761
Moreno	63966	44,176,786	41.8%	31.9%	9.15	691
San Fernando	3226	3,930,864	7.9%	28.4%	33.95	1,218
Avellaneda	6796	8,661,356	6.0%	26.1%	12.54	1,274
José C. Paz	21849	9,280,325	31.4%	25.1%	9.89	425
Ituzaingo	8557	6,516,641	15.0%	24.8%	20.22	762
San Miguel	10834	12,845,669	14.6%	23.7%	12.78	1,186
Merlo	41122	31,593,995	26.7%	22.7%	3.49	768
G. San Martín	6409	7,826,630	5.1%	21.9%	16.09	1,221
Malvinas Argentinas	16818	10,772,087	21.4%	21.8%	14.11	641
Quilmes	21492	13,421,775	13.5%	21.7%	7.92	625
Morón	10351	6,513,712	8.9%	21.6%	26.53	629
Lomas de Zamora	13793	12,156,129	8.5%	20.0%	12.02	881
Pilar	68,041	61,774,070	50.5%	18.9%	12.60	908
Tigre	20243	18,776,508	21.1%	17.6%	35.73	928
Almirante Brown	29030	16,389,811	19.8%	16.4%	9.60	565
La Matanza	61222	41,313,614	17.1%	16.0%	7.74	675
Esteban Echeverría	25414	14,973,815	30.4%	15.3%	15.50	589
Lanus	6797	4,662,619	5.0%	15.0%	21.59	686
Florencio Varela	37,317	24,484,234	35.3%	14.6%	4.62	656
Ezeiza	41366	21,156,359	59.4%	12.0%	4.70	511
Vicente López	1730	2,202,433	1.4%	10.9%	65.93	1,273
San Isidro	3954	3,527,042	3.5%	10.9%	85.99	892
Berazategui	25777	17,448,727	26.4%	9.1%	10.21	677
Greater BA (*)	553,992	416,700,733	18.9%	18.5%	12.32	752

Source: Based on the Catastro de la Agencia de Recaudación de la Prov. De Buenos Aires (ARBA). December 2006.

(*) Including Pilar + 24 municipalities.

To sum up, the land market in the most densely populated area of the country shows a supply concentrated in a few municipalities (Pilar, Moreno, La Matanza, Merlo, Florencio Varela and Ezeiza have 54 percent of all vacant lots). At the same time, these jurisdictions have the lowest percentages of basic infrastructure. In Buenos Aires city land is scarce and new supply comes from old buildings which have to be demolished.

5. Housing Finance: Public Policy and the Mortgage Market

There are two main sources of housing finance: bank mortgages and public housing programs. Other types of financing or mortgage from non-banking institutions are not common. Both mortgage loans and state programs are used to purchase properties for their own use. Nonetheless, the former can also finance purchase of properties by real estate investors to rent them. However, fiscal incentives and other privileges granted to ownership, such as the perceived lower default rates than for investors, bias the mortgage market towards loans to loans.

5.1 Public Housing Programs

A massive state housing program has been in place for several decades in Argentina, based on a supply-side, turnkey production system targeting the poor. It is not based on a standard mortgage-type contract, although households have to pay a (generally fixed) monthly payment for a period of time after the house is allocated. The payment implies a generous subsidy that deters any fair private sector competition in this low- and middle-income market.

The FONAVI (Fondo Nacional de la Vivienda, National Housing Fund) and Programas Federales began in 1972 and 2004, respectively, and they are currently the most important housing programs. Together they supply between one quarter to one third of the flow of new units in the country each year and they contributed almost to one tenth of the housing stock since their inception.

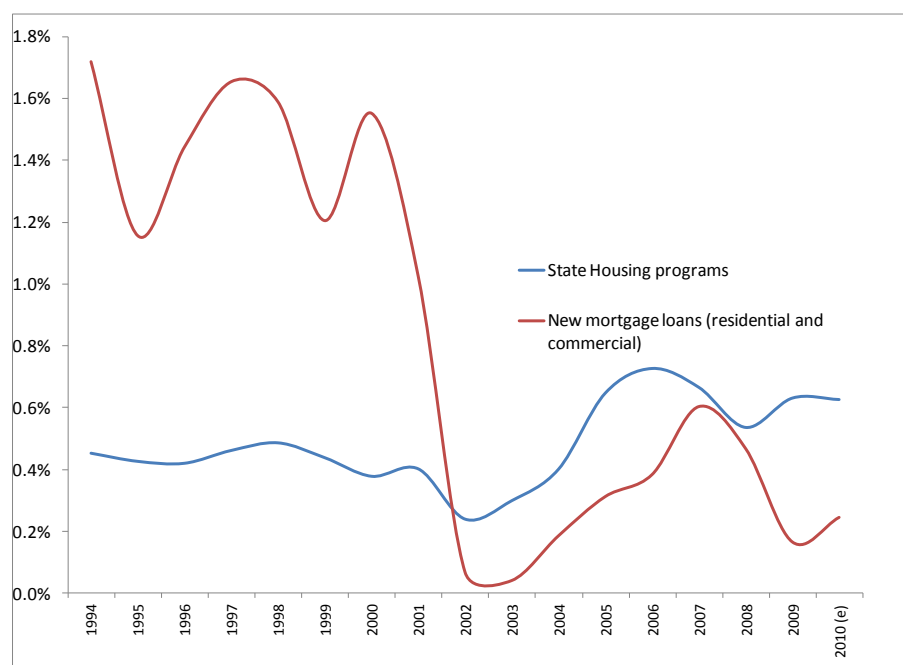
The FONAVI has historically presented severe flaws, among them: i) it overwhelmingly produces new units for sale to moderate and middle-income households, rather than a wider range of low-cost housing solutions suited to low-income families; ii) membership neither requires that households make a down payment nor that they obtain a private market-rate loan, and so households are fully financed by the program under heavily subsidized conditions;³² and iii) the institutional design for decentralization generates low incentives to the efficient use of funds. (See for instance, Cristini and Iariczower, 1997; World Bank, 2006; and Moya, Bermúdez and Sparacino, 2010).

³² The execution of the oldest program, the FONAVI, is decentralized at the provincial level although financed by taxes levied by the Federal Government. Provinces apply a diversity of criteria to allocate houses to their beneficiaries and to subsidize them. The more general way of financing consists in a long-term fixed-rate loan (20 to 50 years and to interest rates of 0-6 percent), generally below the long-term inflation rate.

More recent programs under the Programas Federales did not correct these flaws, given that the basic previous model of housing is the same. However, the main change consisted of a higher degree of centralization of execution at the Federal level, replacing partially the FONAVI in the production of houses for low-income households. The introduction of the Programas Federales meant an increase in housing expenditures from 0.45 percent of GDP in the 1990s to 0.7 percent in the 2000s. However, in terms of new complete units produced the change was insignificant.

What is interesting to note is that, compared to the flow of mortgage loans, government housing resources were growing faster. This is an indication of both the decline of private sector loans for housing and the increasing role of public production assumed by the new administration in charge since 2003.

Figure 13. Flow of Housing State Programs and Bank Housing Mortgages, 1994-2008, in Percentage of GDP



Source: Author's calculations based on BCRA, INDEC and SSDUV.

The production of houses has been irregular. The FONAVI programs reached their between 1998 and 1999, with around 50,000 units provided and 10,000 other interventions,³³ whereas the PF reached its maximum in 2007 with 42,400 units provided and 32,200 other interventions. The table and figures below show the growing importance of the PF relative to the FONAVI. Overall, the highest level of state provision was reached in 2007, with 54,000 houses and 43,400 interventions.

The government intervention as house provider has been important, given that since 1976 almost 1,100,000 units were constructed under the FONAVI or PF programs, almost 8 percent of the total stock available in the country.

By provinces, the province of Buenos Aires accounts for 18 percent of total houses provided since 2003 (see Annex 5. Production of Houses under State Housing Programs by Provinces), Mendoza 6 percent, Misiones 5.9 percent, Santa Fe 5.6 percent, Santiago del Estero 5.3 percent and Chaco 5.1 percent, among the most favored. The distribution among provinces changed dramatically since the inception of the PF, with a larger share for Northern provinces and a smaller for the Southern ones.

To whom these programs are reaching? In 2009 we carried out a survey among 9,900 beneficiaries of FONAVI and PF programs in the province of Buenos Aires in order to find out different characteristics of households as well as houses. We found that even when housing programs served primarily the poorest 40 percent of families mainly (58 percent for the sample, 75 percent in the most recent programs and 52 percent in the older ones), more than 10 percent of the heavily subsidized houses were provided to households in the fifth quintile. Thus leakages towards higher-income families are still important.

³³ These interventions are improvements to houses, including enlargement (adding rooms), adding bathrooms and kitchens, installing running water inside the house or providing a connection to other public utility. The concept is so general that it comprises any type of policy other than providing a new complete unit.

Table 15. FONAVI and Programas Federales, Groups by Household Income per Capita and Periods of House Allocation

Quintile	Before 2000 (%)	After 2000 (%)	Total Sample (%)
First	33.9	58.9	41.1
Second	17.8	15.9	17.3
Third	18.4	14.8	17.4
Fourth	16.1	7.2	13.6
Fifht	13.7	3.1	10.7
Total (#)	7,024	2,829	9,853

Source: Moya, Bermúdez and Sparacino (2010).

Finally, it must be noted that there is no program related to rental housing, nor is the Government considering this type of assistance for the years ahead. Also, there are no planned significant changes considering other type of programs.

Figure 14.

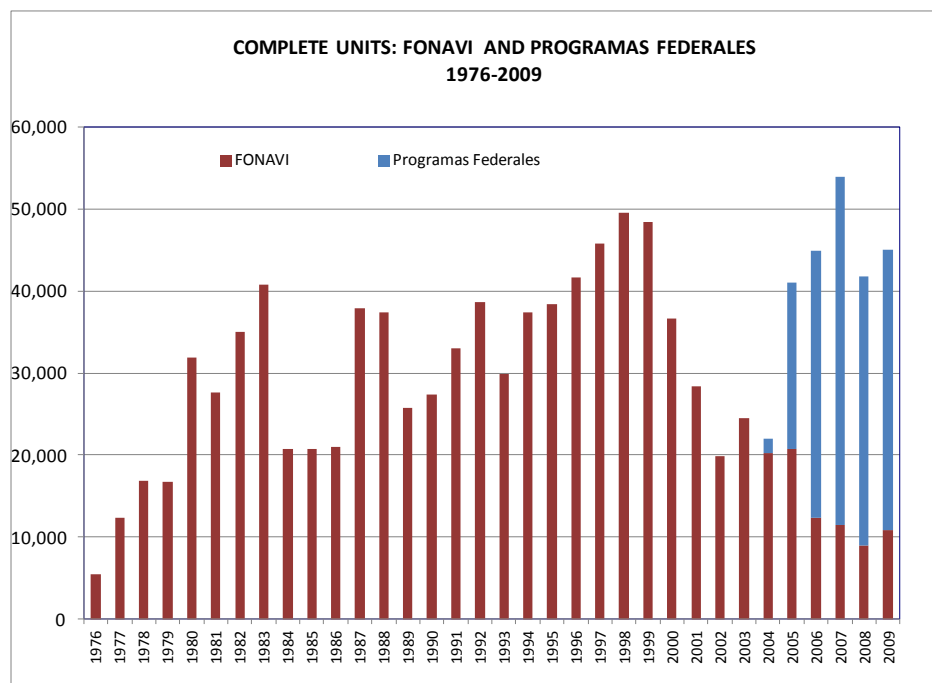
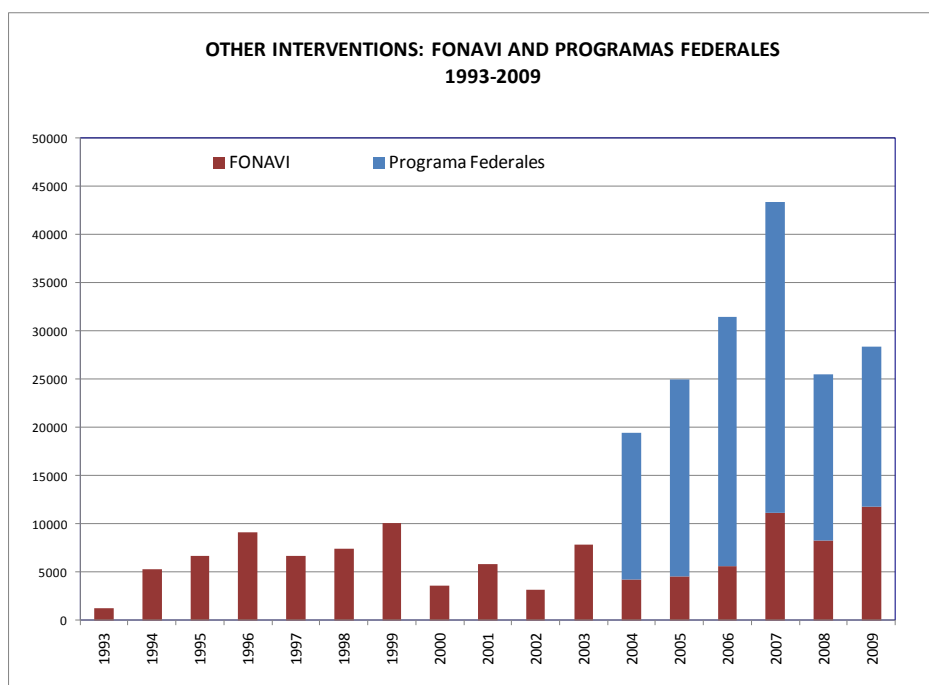


Figure 15.



5.1.1 FONAVI: A More Detailed View

Law 21.581 of 1977 set forth the objectives of the housing program, laid out the general guidelines to target beneficiaries and determined the main sources of funds to fund it. According to the Law, these resources should be allocated to finance partially or completely the construction of low-cost houses for low-income families as well as the necessary infrastructure, urbanization, services and public amenities.

The FONAVI's targeted population established by the Law is to cater to "families of insufficient income, whose ability to pay, beyond other minimum expenses for living, were low enough to cover the installment payments to purchase a low-cost house at a 30-year term...using the lowest interest rate set by the National Mortgage Bank for their usual operations."³⁴

Actually, the loans granted by the program's funds usually do not include interest, and house prices are set below the cost of construction. The norm established that prices should be calculated adding up all the cost involved including the value of the land. However, during even moderate inflationary periods, due to the calculation using historical costs, the

³⁴ The translation is not literal. In Spanish: "cuya capacidad de pago, excluida la atención de las otras necesidades vitales mínimas, no alcance a cubrir el costo de amortización de una vivienda económica en un plazo de hasta 30 años, o en el de vida útil determinada para la misma si fuese menor, con el más bajo de los intereses que fije el Banco Hipotecario Nacional para sus operaciones de financiamiento para la vivienda propia."

program's determined costs are below the true opportunity costs. Both characteristics implied that units are transferred at highly subsidized values.

In fact, it has been estimated that implicit subsidies per unit are disparate among provinces, ranging from 30 percent of the true cost in the least subsidized jurisdictions to more than 60 percent in the most subsidized. The national average reached almost 50 percent, mainly due to the reduction in loan value implied by the underestimation of costs. Other subsidy components include below-market interest rates,³⁵ terms longer than market conditions³⁶ and provisions for overdue installments or outright default on debts³⁷ (Moya, Bermúdez and Sparacino, 2010).

With the beginning of the FONAVI, the provinces created their own housing institutes (known as Institutos Provinciales de Vivienda, IPV) which were responsible for formulating construction projects, hiring the developers in charge of the construction, following up on work, selecting the beneficiaries and recovering invested funds through the collection of repayments. Although the Law recommended that installments be no higher than 15 percent of incomes, in practice these ratios are 20-25 percent or more.

Projects are carried out by private companies under conditions specified by and according to units designed by the provincial housing institutes. The housing projects are planned to be self-sufficient, in the sense that they include houses, schools, health care centers and other facilities. There is practically no sensitivity to demand needs, given that houses are located on the basis of land availability, with uniform designs and quality.

Several important reforms were introduced in the 1990s. In 1992 Law 24.130 began a process of almost complete decentralization towards the provinces. In this manner, the IPV's assumed complete responsibility for the organization and execution of FONAVI programs. Responsibility for auditing the functioning of the IPV's was vested at the federal level, although without assigning proper powers to sanction the misuse of funds or other failures. In this way, the Undersecretary of Urban Development and Housing (Subsecretaría de Desarrollo Urbano y Vivienda, SSDUV), the organ in charge at the federal level, can only annually inform the public on the functioning of FONAVI programs.

³⁵ Generally at fixed interest rates ranging 0-6 percent annually.

³⁶ The loan term can reach up to 600 months, which is unusual in the Argentine market (and also elsewhere).

³⁷ Overdue debts amounted to 36 percent of total debts in 2007.

In 1995 the Housing Federal System (Sistema Federal de la Vivienda) was created by Law 24.464. This institution was expected to ease the coordination problems among provinces and the federal government, as well as improve state housing policy. The Housing Federal System is formed by representatives of the FONAVI, IPV's and the newly created National Housing Council (Consejo Nacional de la Vivienda – CONAVI).

In fact, the law also set up the National Housing Council, which represents the IPV's, that is, the provinces and the federal government. Among their responsibilities, this council must coordinate and plan the functioning of the federal system; must advise the SSDUV, congressmen and other authorities on related matters; must evaluate compliance with housing laws; and must define criteria to be applied to beneficiaries. It must be noted that, given that the CONAVI does not have the power to sanction deviation from the law, in practice many of these responsibilities cannot be completely fulfilled

The resources funding the FONAVI are the following:

1. Federal taxes on gasoline and on natural gas. According to the law, 33 percent of the revenues for these taxes must be allocated to funding the FONAVI, whereas the remaining percentage is assigned to the social security system, to the provinces and to the federal government.
2. The law originally required a minimum amount of AR\$ 900 million to be transferred to the FONAVI. However, this floor was eliminated in 2002 after the macroeconomic crisis by Law 25,570. Also, this law established that the provinces could devote FONAVI transfers to uses other than addressing the housing deficit (known as “libre disponibilidad de los fondos”).
3. Given that the funds are conditional and non-reimbursable transfers, provinces have the responsibility to recover the loans granted, earmarking them to a provincial housing fund.
4. Some provinces fund with own resources, enlarging the provincial housing provincial fund.

Historically, 67 percent of the FONAVI was funded by automatic transfers from the federal government, 16 percent by loans repayment and 17 percent by other sources.³⁸

How are the transfers allocated among provinces? The law specified that the distribution must be made according to fixed coefficients set forth in the law, but those coefficients are supposed to be modified every two years by the National Congress. Factors that must be taken into account in order to change those coefficients include, among others, the correct uses of funds (i.e., provinces with the worst performance would be sanctioned), the recovery of loans, the housing deficit and the reports from the CONAVI. In practice, however, those coefficients have never been revised since the law was passed in 1995.

Resources must be used to finance totally or partially the purchase and/or the construction of houses, complementary works, infrastructure and other related services and amenities. Also, funds can be used to guarantee additional resources to expand the fund's size.

On average, 77 percent funds were used to build new houses, undertake other improvements (such as building walls or bathrooms) and grant mortgages; 11 percent to fund the functioning of IPVs and 5.5 percent to provide for infrastructure and other services.³⁹

The IPVs are allowed to offer several programs, such as the following:

- Free demand: aimed to meet general housing needs housing according to requirements set by IPVs.
- Co-financed: NGO's and other types of social organizations share the financing and execution of works. The private organization generally is in charge of selecting the beneficiaries.
- Decentralized: the municipalities are in charge of the works and the selection of beneficiaries.
- Individual loans: beneficiaries obtain loans to repair or enlarge their homes.
- Securitization: loans are securitized and sold to the National Mortgage Bank.

In the following table is shown the different programs implemented by the FONAVI in two years, 2001 and 2009 (the last available). As mentioned, in 2004 the Program Federal was launched overshadowing the FONAVI. By far, until 2001 the provision of complete units was

³⁸ These figures are the average for 1992-2001, the heyday of the FONAVI.

³⁹ Figures correspond to 1992-2001 period.

the most important way to cater housing to families. Among the different programs, those units supplied through the free demand program were the most important, although those through decentralization (with the involvement of municipalities) were also relevant. The same pattern is found in 2009 although with increasing share of other interventions (so called “soluciones habitacionales”), mainly enlargement of precarious houses with additional bedrooms. *It can be noted that there was no programs related to renting houses.* The goal was (and still is) increasing the ownership rather than promoting a rental market among low income families.

Table 16. Programs Implemented by FONAVI, 2001 and 2009

Programs	2001	2009
Free Demand		7,088
	14,198	
Co-Funded		1,034
	3,792	
Securitization		-
	267	
Decentralization		1,792
	8,532	
Complete units (a)		9,914
	26,789	
Loans for houses (b)		901
	1,616	
Loans for repair (c)		724
	2,663	
Served lots (d)		1,659
	250	
Bathrooms and kitchens (d)		-
	40	
Enlargement (f)		9,446
	2,823	
Complete units (a+b)		10,815
	28,405	
Other interventions (c+d+e+f)		11,829
	5,776	

Source: Author’s compilation based on SSDUV audits.

It must be noted that since the decentralization of the FONAVI, the provinces began to apply different systems to allocate the houses and loans among potential beneficiaries. Before this reform, in 1992, the system to select the beneficiaries was ruled by norms dictated at the federal level. That is, the decentralization also implied to allow provinces to apply the criteria they wanted the most. In fact, some provinces even decided to transfer this task to the

municipalities (Buenos Aires, Córdoba, Mendoza and Neuquén) whereas others kept the responsibility in the provincial government.

Among the general conditions applied in the provinces, the beneficiary should be non-owning family committed to using the allocated house as a permanent home (that is, they cannot rent or resell, at least not immediately). In addition to these conditions, that were common to most of the jurisdictions, each province gives priority to other beneficiary characteristics such as family size, time since requesting the house, total household income, degree of poverty, and the presence of disabled family members, among others.

5.1.2 Programas Federales: An Extension

After the economic crisis erupted in 2001/2002, there were numerous changes at the macroeconomic level (e.g., a partially floating exchange rate, a de-dollarization process, etc.). There were changes at the microeconomic level as well, and one of them occurred in State housing policy.

In the midst of a high unemployment rate and pervasive poverty, the government launched the *Programas Federales* with the main objective of spurring economic activity and employment. These programs increasingly displaced the FONAVI.

In fact, until then the housing policy had been completely implemented with FONAVI transfers at the provincial level. The IPV's were in charge of designing projects, choosing beneficiaries and setting subsidies according to Law 24.464.

With the PF the federal government took the lead in designing and implementing housing policy. Since many IPV's were not equipped to undertake rapidly the housing projects that were needed to boost employment, the federal government took over this role in cooperation with the provincial institutes.

The PFs work basically in the same way as the FONAVI. That is, it provides complete units or other types of interventions (e.g., enlargement of houses, construction of bathrooms and kitchens, etc.) with the direct intervention of the State. The government decides the location, design and parameters for selecting beneficiaries, manages bidding among private companies for construction projects and makes loans to households, generally under highly subsidized conditions.

Differently from the FONAVI, however, the PFs offer programs designed at the federal level, including the type of construction and how beneficiaries will be chosen. These changes introduced some inflexibility into respond to housing needs given that the goal was to increase employment and economic activity.

The following table shows the different programs introduced by the PF since 2004.

Table 17. Programas Federales Programs Introduced Since 2004

Target	Type of intervention	Programs
Low-income families	Direct State intervention aimed to the construction of complete units and the granting of loans for the improvement of housing in bad conditions. The objective was also the creation of jobs through cooperatives and the participation of small size companies. Main projects will be undertaken in economic depressed areas.	PF Emergencia Habitacional: construction of low cost houses using labor with unemployment subsidy or any other State assistance. Labor is organized in cooperatives for the construction of new units.
		PF Solidaridad Habitacional: projects of construction of houses and infrastructure in urban areas located in those regions more heavily hit by the economic slump. Also the projects must use unemployed persons as well as those with other public assistance. Projects will be executed by private companies. Areas originally chosen were in the provinces of Corrientes, Chaco, Entre Ríos, Formosa, Jujuy, Misiones, Salta and Tucumán. Recently, Córdoba, Catamarca, La Rioja, Chubut, Río Negro, San Juan and Tierra del Fuego were included.
		Other programs: PROMEBA (improvement of neighborhoods), Mejoramiento Habitacional e Infraestructura Básica (loans to improve the houses' conditions), Prosofa (more social than housing programs) y Propasa (water provision).
Low and middle-income families	Direct State intervention aimed to the construction of complete units and the granting of loans for the improvement of housing in bad conditions.	These types of programs are more FONAVI-like. PF de Construcción de Viviendas (Etapas 1 y 2): aimed to the construction of 120,000 complete units hiring private companies and funded with federal funds. PF Mejor Vivir: aimed to the construction of complete units and the finishing, enlargement or improvement of houses in bad conditions. The objective was to reach 140,000 households.

Source: Based on SSDUV information.

In 2009 34,185 houses were built through PF, mainly through “Construcción de Viviendas” and “Mejor Vivir.” Other interventions account for the other 16,801 families supported by its programs.

Table 18. Programas Federales Year, Complete Units and Other Interventions, 2009

	Complete units		Other interventions	
Mejor Vivir	11,839	35%	32	0.2%
Solidaridad habitacional	1,028	3%	5,043	30%
Emergencia habitacional	4,768	14%		
Mejoramiento habitacional	363	1%	11,326	67%
Urbanización de villas y asentamientos precarios	2,192	6%	400	2%
Construcción de viviendas	13,995	41%		
Total	34,185	100%	16,801	100%

Source: Based on SSDUV audits.

5.2 The Mortgage Market

In the 1970s and 1980s the mortgage market was dominated by public banks. A short-lived boom in mortgage loans took place in the mid-1990s in response to favorable macroeconomic and institutional conditions.

As mentioned, the mortgage market expanded rapidly during the 1990s as macroeconomic stability was reached after the implementation of a currency board (i.e., fixed exchange rate backed by Central Bank international reserves) and an upgrade of the regulatory framework on mortgage lending. Mortgage loans increased from being practically nonexistent before these reforms to an equivalent of 4 percent of GDP in 2000. Mortgage loans also became important for banks (18 percent of their loan portfolio of private sector debts) and for new homeowners, given that 30 percent of new titles were financed by this mean.

In the macroeconomic crisis of 2001-2002 the functioning of the financial system completely broke down. Although the crisis did not originate in banks, they were hard-hit struck by the increasing amount of capital outflows following the lack of confidence in the sustainability of the currency board. In fact, 20.5 percent of private sector deposits were withdrawn from the financial system between March and December of 2001. The whole financial system was under liquidity distress, and the issuance of new loans was suspended in mid-2001.

In December 2001, the Argentine Government declared the default of its sovereign debts aggravating the bank's equity position, given that they were highly exposed to these securities. In January 2002 the peso depreciated against the dollar by 40 percent in the formal market (from AR \$1 to AR \$1.4 per dollar), while in the informal market the dollar reached AR \$4 in a few months (a 300 percent depreciation).

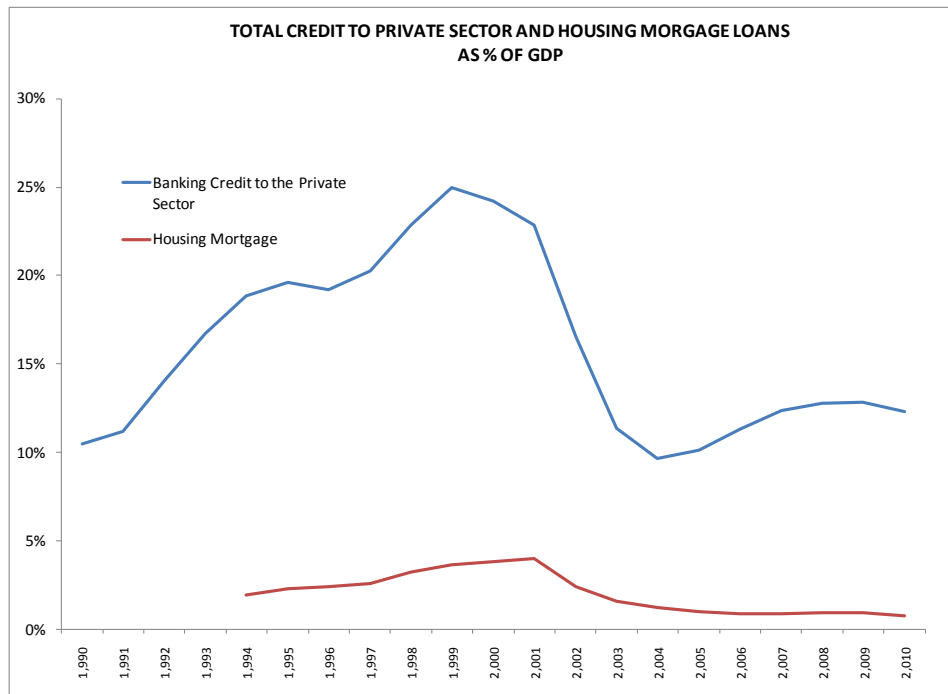
As of December 2001, 57 percent of financial system's assets and 72 percent of housing loans were denominated in foreign currency. As counterparty, banks' dollar liabilities represented 55 percent of total liabilities (49 percent of total assets). Given the sudden depreciation of the domestic currency, and in order to protect the borrowers, the government decided to convert banking debts in foreign currency to domestic currency at the previous exchange rate (AR\$/US\$ 1) and to introduce an adjustment coefficient by a salary index (known as CVS, Coeficiente de Variación Salarial). Later, this adjustment was abandoned for individuals as well for company loans, implying an enormous transfer of resources to debt holders.⁴⁰ Complementarily deposits were also converted at a parity of \$/US\$ 1.4, and the adjustment by CVS was allowed. Also, mortgage loans were pesoified and foreclosures were temporarily suspended.

After the depreciation, the soaring export commodity prices in the international markets spurred a fast recovery of the economy. In fact, between 2002 and 2010 the economy grew at an annual rate of 7.6 percent, with 14 percent annual growth in the construction sector. In spite of the general economic improvement after the crisis, the mortgage market never returned to its pre-crisis depth. In 2010 the stock of mortgage loans represented 0.8 percent of GDP, or 6 percent of total credit to private sector. In 2009 only 6 percent of new titles were financed by mortgage loans, compared to 25.5 percent in 2001. That is, the housing market recovered with less leverage.

In 2009 the banking system had only 158,000 housing mortgage clients (down from 500,000 in 2000). For a country where more than three million households do not own a house, this figure looks quite insignificant. Also, Auguste, Bebczuk and Moya (2011) found that almost 80 percent of homeowners purchased their houses with their own savings.

⁴⁰ Agarwal, Chomsisengphet and Hassler (2005) studied the 2001/2002 crisis in Argentina analyzing a unique loan-level data set to empirically assess the impact of the currency devaluation and the economic response policies on prepayment and default patterns of residential mortgages. Among other findings, they noted that prepayment rates increased significantly after the domestic currency depreciation among wealthier families and foreign currency debtors, while default rates jumped among peso-denominated debt holders and low income families.

Figure 16.



Source: BCRA and INDEC data.

Why is the market for housing loans so underdeveloped? There are several causes. On the supply side, negative real interest rates discourage savers from putting their money into bank deposits, the main source of funds for financial institutions, current legislation prohibits CPI or wage indexation of loans and deposits, and previous confiscations of deposits cause small investors to avoid those instruments, among other reasons.

On the demand side, as stressed in Auguste, Bebczuk and Moya (2011) macroeconomic conditions push small investors to purchase houses, considered a safe haven in Argentina, which in turn raises property prices and makes houses less affordable for middle and low-income families. In addition, nominal interest rates are well above the two-digit threshold, which prevents many households from applying for loans.⁴¹

As mentioned, mortgages are available to finance houses no matter the destination of the loan. Limits are imposed by LTV ratios, which vary across by banks, the monthly installments to income ratio, which usually cannot be above 30 percent, and the credit track record of the

⁴¹ For instance, a simulation exercise which considers a 25-year fixed-rate mortgage loan at 12 percent annually, to finance 80 percent of the house's value, would exclude almost 95 percent of households from this market.

borrower. Although small investors can take advantage of this market when they comply with banks' requirements, given the small size of the mortgage market, it can be stated without a doubt that acquisitions by those investors are generally not leveraged.

The following table shows the main characteristics of four banks active in the mortgage market, three of which are state-owned entities.⁴² It can be noted that the longest term is 30 years, offered only by one bank, the Banco de la Nación Argentina, whereas the second longest is 20 years.

To realize how limited the market is, it should be noted that the maximum amount reaches is only one million pesos (equivalent to less than US\$ 250,000) which is below the value of a standard 80 square meter apartment in the Buenos Aires city. Also, fixed interest rates range from 12.75 percent to 18 percent, and floating rates from 11.9 percent to 17.5 percent annually; other costs add 2 to 3 percent to loans of both types. LTV can be close to 100 percent, though only for formal workers, and 80 percent for informal ones.

Table 19. Selected Mortgage Contracts Offered in October 2011

Characteristics	Banco Provincia de Buenos Aires	Banco Ciudad de Buenos Aires	Banco de la Nación Argentina	Banco Santander Rio
	State owned – Prov. Of Buenos Aires	State owned- Buenos Aires city	State owned – Federal Government	Private Sector owned
Loan size in \$(max - min)	616,650 – 10,000	750,000 – 10,000	580,000 – 5,000	1,000,000 – 15,000
Loan term in months (max - min)	240 - 12	240 - 60	360 - 12	144 - 12
Interest rate - Fixed (max - min)	N.A. – N.A.	18.0 – 13.5	16.00 – 12.75	17.00 – 17.00
Interest rate - Float (max - min)	14.14 – 12.50	17.47 – 11.93	16.00 – 12.75	N.A. – N.A.
Adjustment to interest rate according to	CD interest rate + 4 p.p.	CD interest rate 59 days	CD interest rate 30-59 days +4p.p. /CD interest rate large deposits+4.5 p.p.	N.A.
Adjustment frequency	Monthly	Bimonthly	Quarterly	N.A.
Requirements				
Age of the borrower (Min - Max)	18 - 70	18 - 65	21 - 65	18 - 65
Working years	1.00	2.00	1.00	1.00
Installment to income (%)	40	30	30	35
Minimum income (formal workers - informal workers)	N.A. – N.A.	N.A. – N.A.	1,000 – 1,500	2,500 – 2,500
LTV (formal workers - informal workers)	100-70	75-75	100-80	80-80

Source: Based on BCRA information. Exchange rate AR \$4.24 per US dollar.

⁴² The Central Bank reported that mortgage contracts were offered by 25 banks, which are active in this market. There are 80 financial entities in the Argentine system.

How does this underdeveloped mortgage market affect the rental market? The clearest effect is for a household to delay the purchase of a house, thus putting pressure on the rental market.⁴³ This additional demand implies that rents must go upward to clear the market given the supply. On the other hand, recall that macroeconomic conditions encourage investors to purchase houses for renting, increasing current purchase prices and depressing future rents. The results found previously show that rental yields are high in the international comparison, indicating that some pressure from demand is prevailing.

6. Legal and Regulatory Framework

6.1 Introduction

Argentine urbanization was the consequence of several factors. First, massive European immigration at the end of the nineteenth century and the beginning of the twentieth century gave rise to the formation of the main urban centers, where newcomers worked in the nascent domestic manufacturing industry. Second, the implementation of import substitution industrialization policies after the 1930s accelerated the concentration of the population in the main urban areas. A second major immigration wave from neighboring countries after the 1940s brought about an acute concentration in those areas.

Argentina's urbanization history parallels its housing conditions; increasing demand due to population growth put pressure on rents and house prices. As early as 1921 a law was enacted to freeze rents due to constant urban tenant protests. During the Perón Administration (1946-1955) new regulations to the rental markets were set, including freezing rents and automatic renewal of contracts, among other measures.⁴⁴ These regulations were in force until 1976 when a new law (Law 21,342) set the conditions for the functioning of the rental market based on the supply and demand. In 1984 the current norm was enacted in Law 23,091.

6.2 Current Legislation

In addition to describing the features that contracts are allowed to contain according the laws and other regulations, this section includes a discussion of the main practical difficulties in enforcing

⁴³ Some additional effects are the longer time a person takes to live in her/his own house independently, affecting the household formation, and also the reduction in the quality of the houses, given that sometimes a family would prefer to buy a lower-quality house than renting a better home.

⁴⁴ It must be noted that in 1947 the Census reported that 62.7 of the households were tenants.

contracts (e.g., eviction). The sources of information are interviews with actors related to the sector.⁴⁵

Contracts between tenants and owners are ruled by Law 23,091, originally enacted in September 1984.⁴⁶ This law is applied across the country, although provinces have different norms regarding its implementation.

The law sets forth two years as the minimum term for renting residential housing, and three years for other purposes (for instance, commercial stores). Tenants can terminate the lease arrangement after six months of its beginning if they provide two months' notice and after paying the equivalent of one and a half month of rents. If the termination occurs after the first year, this payment is reduced to one month. Landlords, however, cannot terminate leases early.

Since 2002 the law prohibits the denomination of leases in foreign currency, which had been permitted since 1991 with the beginning of the currency board (aka the convertibility regime).⁴⁷ Also prohibited is frequent adjustment of rental payments for inflation. Although indexation of rents is not allowed, infrequent adjustments are permitted if official price indexes are used. Contracts usually include the possibility of renegotiating monthly rents every year.

Payments must be established on a monthly basis. As guarantee, the landlord can require up to the equivalent of one month's rent as a refundable security deposit. In practice, property owners usually require a two-month deposit and other pledges such as another guarantor with real property; tenants must demonstrate formal incomes to assure that they can pay monthly rent.

It is customary for landlords to pay taxes and other fixed property payments such as street maintenance and garbage collection. Tenants are responsible for paying public utility bills.

Contracts are in force when the two parties sign the document. Except for small tax duties in some jurisdictions (e.g., stamp duties in the province of Buenos Aires), there is no obligation to validate the document valid in the presence of an official.

The law sets forth two causes of eviction. The first one is nonpayment of the last two rents due. The second cause is the end of the lease (two years or longer for housing) when the property is occupied. Before eviction is possible, the tenant must be given at least 10 days'

⁴⁵ Asociación de Inquilinos (Director). Comisión de Vivienda de la Cámara de Senadores de la Nación (Advisor Diego Pedreira.)

⁴⁶ "Ley de Locaciones Urbanas" enacted October 16, 1984.

⁴⁷ With the macroeconomic crisis in 2001, rental agreements set in foreign currencies were "pesoified," that is, converted from dollars to pesos at a previous exchange rate (unfavorable to the landlord).

notice to pay her debts or vacate the house. The renter must respond within the following 15 days.

There are two legal procedures to remove tenants who neither pay nor vacate the property. The first is an eviction lawsuit, which involves a lengthy process that can take from six months to 1 year, depending on the judge's criteria and on procedures set forth by provincial law.

The second procedure, known as immediate eviction, has been increasingly applied in the last four years, although the law in some provinces has permitted immediate eviction for the last seven or eight years. This procedure allows the landlord to reclaim the property in two to four months and to incur lower legal expenses. Jurisprudence in this area, however, is not uniform. Some judges take into consideration the tenant situation's (for instance, children on the property), which increases uncertainty regarding the final outcome. In order to pursue this course of action, landlords must pay a refundable deposit, which sometimes discourages this procedure.

The legal costs of both procedures are relatively low, with the exception of forgone rent. Additionally, if damages to the property are found after eviction, another judicial procedure must be followed. According to some actors in the market, legal costs can represent about 1 percent of the total lease amount.

Most of the disputes between tenants and landlords, besides those mentioned above, are the following:

1. *Before the lease is signed:* i) Responsibility for house maintenance costs. Although legal norms establish that landlords must pay for house maintenance, some contracts transfer that obligation to the tenant. ii) The fee paid to the real estate company. For instance, although in Buenos Aires city the norms set a fee of 4.15 percent of a two-year lease (about one month), some brokers require two months' rent as a fee.
2. *During the rental period:* i) Small disputes regarding the repair of some appliances and other problems with the property. ii) In apartments, the distribution of monthly expenses shared among tenants. Shared expenses are in turn divided into ordinary expenses (based on the current maintenance of common areas in a building) and extraordinary (unusual and generally of a larger amount). Traditionally, tenants pay the former and landlords the latter.

However, disputes arise when there are difficulties in distinguishing between types of expense or when the payment obligation was not clearly set.

3. *After lease contract expiration.* Problems arise from differences regarding the condition in which the property is delivered to the owner (for instance, whether it is painted, clean, etc.) and regarding whether the refundable deposit is returned completely and in a timely manner.

In addition, some institutional problems arise when disputes of small amount or differences exist between tenants and landlords. In fact, there are no specific bodies, such as administrative agencies, where disputes can be resolved quickly and inexpensively. The only available forum is the mediation agency for disputes between consumers and producers created by the Law of Consumer Defense. This option, however, is seldom used by parties in rental markets, presumably due to the length of the process.

The law further provides for, in Article 10, the creation of a system of incentives to promote the rental market for new low-cost units.⁴⁸ Among other characteristics, leases must be for at least three years, rents must be insured by the Caja Nacional de Ahorro y Seguro (at the time of the enactment a state-owned company but currently a private insurer) and rents must be adjusted quarterly by a combination of the CPI and a salary index, but adjusted downward. In exchange for being part of this system, some tax incentives are offered.

The tax incentives included the following: i) deduction of the value of the investment, excluding land, in income tax returns; ii) exemption of incomes from those rents from income tax; iii) exemption from the Net Wealth tax of houses offered under this law; and iv) exemption from stamp duties of rental agreements made under this Law. This article, though, was suspended by Article 29 of the Law of Economic Emergency enacted in 1989. According to interviews with members of the SSDUV, the incentives did not result in a stronger supply of houses for rent.

With the Law 24,441 of December 1994, known as “Ley de Fideicomisos,” several innovations were introduced to the functioning of the housing and the mortgage markets. The law enhanced the legal institution of the trust, allowing the securitization of mortgage loans granted by banks. This change significantly improved the efficiency of the secondary market,

⁴⁸ Low-cost units as defined in Resolución 368/76 de la ex Secretaría de Vivienda y Urbanismo.

making Argentina's market the most developed in the region.⁴⁹ Financial entities found an important source of funds by packaging mortgage loans in those structured products. The sudden depreciation of the domestic currency at the beginning of 2002, however, almost completely eliminated this market, which has only recently begun to recover on a small scale.

Since the law has been enacted, overdue mortgage loans can be executed by the more agile procedure, reducing costs and time. Law 24,441 introduced a simplified procedure to recover mortgage loans in case of unpaid installs with minimum legal costs and the least participation of judges (contrary to the previous laws). This procedure looks for to reduce time and costs (Article 52). Also, operations involving the transmission of titles including mortgages to trusts are exempt from some taxes (VAT and income taxes) as well as the benefits derived from these trusts (Articles 83 and 84).

Regarding the housing markets, the law established limits on the cost of brokerage and deregulated key professional markets for the construction industry. In regard to the latter, for instance, architects and surveyors, among others, were no longer required to join professional associations.

Finally, Law 25,402 of December 2000 allowed a mortgage loan interest deduction of up to AR\$ 4,000 (less than US\$ 1,000) on houses purchased as residences rather than investments. In addition, the amount of the outstanding debt on a house can be deducted from the taxable amount of net wealth ("Bienes Personales"). While both measures would encourage ownership of houses given the absence of other compensatory incentives for renting, in light of the mortgage market's small size their effect is negligible.

6.3 The Informal Rental Market: The Lack of Guarantees

A household needs more than demonstrable income to rent a property. Usually landlords require that tenants guarantee the rental contract with another proprietor's deed or other proprietor. Given that deed registries are not interconnected across provinces, landlords usually demand titles of properties located in the same city as the rented house. Lack of access to such guarantees greatly complicates renting for newcomers to a place.

⁴⁹ See, for instance, Kiguel and Podjarny (2007) for a comparative analysis of the developing of secondary mortgage markets in Argentina, Chile and Uruguay.

A market solution emerged as private entities, generally insurance and financial companies, began to offer contracts to guarantee debts or rental contracts with their own collateral.⁵⁰ These transactions implied that the would-be tenant must assume additional costs.

There is also an active informal market in collateral for rental contracts. Such collateral is offered by landlords who assume the guarantee for a cost that is twice that in formal markets. The main participants in this market are immigrants and informal workers, who usually do not have access to financial entities.

A non-financial company offering formal sector guarantees is Monclair, established in 1992,⁵¹ which has agreements with real estate companies throughout the Buenos Aires metropolitan area. A potential tenant's approval is based on her credit history, her demonstrable income and other criteria. The cost of this service is approximately two months' rent for a two-year lease (6.1 percent of the total cost of the lease), and it guarantees the payment of rents and other expenses.

Several financial companies participate in this market as well. Banco Provincia de Buenos Aires through its affiliate, Provincia Seguros, offers guarantees for young renters (18 to 35 years old). Their incomes must be over AR\$ 2,000 a month, and their rent cannot exceed 40 percent of their income. The costs for this service are equivalent to 5-6 percent of the total value of the lease.

Other banks offering guarantees include Banco Ciudad de Buenos Aires and Banco Supervielle. For 24-month leases on properties smaller than 60 square meters, Banco Ciudad⁵² charges the equivalent of 80 percent of the first month of rent (with taxes, the total is close to 100 percent). The cost for larger properties is 150 percent of the first month of rent (180 percent with taxes). Additionally, tenants who comply with the terms of their leases receive favorable consideration for mortgage loans.

Banco Supervielle offers collateral for contracts at a cost equivalent to 5.25 percent (plus taxes, which adds another 1.1 percent) of the lease's total value. Monthly rent cannot exceed AR\$ 5,000.

⁵⁰ This type of contracts is ruled by the Argentine Civil Code.

⁵¹ Source: <http://www.monclair.com.ar>.

⁵² Banco Ciudad is a state-owned entity.

6.4 Bills in the National Congress

There are currently no bills involving rental markets under active consideration in the National Congress. However, several bills drafted by Congressmen are in the preliminary stages of consideration. These proposals include the following:

1. Regulation of the rental market. Author: Senator T. Quinquela. This bill was not presented in time to be considered in 2011, includes the following characteristics:
 - The creation of a state body called the “Organización Estatal de Locaciones Urbanas para Alquilar.” This organization would be in charge of building 100,000 units yearly to offer in the rental market and of the application of this law.
 - This new law would apply to houses of less than 150 square meters.
 - Extension of leases from the current two years to five years, with an option for renewal by the tenant.
 - Rents would be set by the new state body according to construction costs, which would be divided by 150 to determine monthly rent.
 - Tenants could not be required to pay either rent or guarantees in advance.
2. Changes in Law 23,091. Authors: Dip. V. Donda and others. September 2011. This bill is in the preliminary stages of previous stages to be treated in the assembly. Forbids the adjustment by inflation of rents and other expenses. Notification for evictions must be sent with more days in advance (10 days in the current law, 20 days proposed). Regulations on brokerage fees and other expenses.
3. Changes in Law 23,091. Authors: Dip. N. Belous and others. June 2010 and July 2008. This bill is in the preliminary stages of consideration. Extension of the minimum lease term to three years. Forbids inflation adjustment of rents and other expenses.
4. Changes in Law 23,091. Authors: Dip. J. Gioja and others. June 2010. This bill is in the preliminary stages of consideration. Extension of the minimum lease term to three years.

5. Changes in Law 23,091. Authors: Dip. J. Gioja and others. October 2008. This bill is in the preliminary stages of consideration. Forbids the adjustment of rents and other expenses during the contractual period.

7. Conclusions and Policy Recommendations

In Argentina, ownership is the preferred option for households (Cristini, Moya and Bermúdez, 2011). Renting a property is more associated with newly formed families and younger residents. Remarkably, however, renting is more widespread among high earners than among the poorest.

Since the practical disappearance of long-term loans for housing in 2002, households have had to purchase homes with their own savings or with loans from relatives.⁵³ Those without savings or prosperous relatives had to rent, share housing with others or occupy property with or without owners' permission.

Not surprisingly, out of the 210,000 new households formed annually since 2001, only 84,000 became owners, and 50,000 were sharing homes. The tenure condition that grew the most was among households that were tenants, at 113,000 annually.

Even when the user cost of ownership is lower than 10 years ago, renting is still more convenient when property prices are taken into account. User cost for owners is about 11 percent and the rental yield no more than 7 percent. The two-digit inflation rate helps to explain the current decade situation.

However, a rental yield of 7 percent is comparable to those in the upper half of the world distribution of rental yields that were used here. It means that properties are not expensive if we would have measured with a common international interest rate for all the countries but, given the high opportunity costs of funds for Argentina, it is not necessarily so. What is clear, however, is that renting is less affordable in relation to purchasing a property vis-à-vis the rest of the world.

How, then, did rents rise less rapidly than housing demand? The main hypothesis is that new units built for renting grew even faster than. We estimated that 131,000 new houses for rent have been into the housing stock annually since 2001, surpassing the estimated flow of demand

⁵³ A survey conducted in 2010 shows that only 10 percent of owners bought their homes with mortgages, 4 percent with personal loans, 6 percent with loans from relatives and 0.5 percent with a public housing program. As a result, 79 percent did not use any loans at all, and over 90 percent of households for homes with their own savings. These results represent findings from current households asked about how they financed their homes regardless of when they bought them (Auguste, Bebczuk and Moya, 2011).

(113,000). These houses come from small investors seeking to protect their savings from inflation and from any confiscatory risk.

Currently, 31 percent of the households (3.7 million) do not own a house. While some of them would probably continue renting if this option is convenient, we also know that 854,000 of those households are sharing a home, probably as occupants in the official statistics. We estimate that one third of renters (430,000 in urban areas and 675,000 in rural areas) live in units of poor quality, and likely with informal contracts.

According to the findings of this study, several problems pose serious obstacles to households' to reach their optimal housing condition:

1. *High house prices.* Those prices results neither from high construction costs, which rose more slowly than prices, nor a lack of competitiveness among builders and input providers in the construction industry. Instead, high prices result from macroeconomic conditions favorable to investment in apartments; the construction activity is at a historical record level.
2. *Absence of mortgage loans.* This both delays home purchase and pushes households into the rental market.
3. *Costly rental values.* On average, rents rose faster than incomes. Some families are in a situation of financial vulnerability, and others probably moved to other tenure condition (e.g., as occupants).
4. *Potential tenants need to demonstrate incomes and obtain a third-party guarantee.* Informal workers, particularly newcomers, are at disadvantage to rent a property with a formal contract. They have to become tenants of units in poor conditions and without protection against abusive clauses.

Each problem must be addressed with a particular policy. The most straightforward way to cool down the real estate market is to allow real interest rates to become positive. This means applying fiscal and monetary policy consistent with the goal of lowering the inflation rate, a set of policies that goes beyond those particular to housing.

In the same vein, encouraging the development of mortgage markets require some basic macroeconomic stability. Additionally, the prohibition on indexation of loans and deposits by the

Law 23,928⁵⁴ discourages banks from granting long-term loans and potential borrowers from taking them due to two-digit nominal interest rates.

Given the rising rental values observed in recent years, families who have to rent are likely to experience financial stress in case of a cyclical downturn. Although families in the bottom income deciles were favored by recent economic growth, with their wages growing faster than those of high earners, they remain vulnerable to unfavorable labor market conditions.

It must be remembered that there are no state housing programs targeting poor tenants. Policies are designed to promote ownership owners through the provision of subsidized units or, occasionally, through below-market interest rate loans.

Also, it should be taken into account that younger residents the most likely to be tenants. This implies that assistance to renters in a situation of financial need (i.e., with a high rent-to-income ratio) should take into account changes in income change over the life-cycle, as targeting low-income households can also subsidize young people with potentially high income.

According to the law that created the FONAVI, the resources must be used to finance total or partially the purchase and/or the construction of houses, complementary works, infrastructure and other related services and amenities. *Basically, there is no mechanism for implementing programs such as subsidized rents or payment guarantees for low-income households, but there is support for building houses for renting.*

On the other side, the PF, given that they have a flexible normative framework,⁵⁵ they would have more room to finance a program of subsidies for poor families who are renting and to build up an initial fund to grant guarantees to rental contracts signed by low-income informal workers.

Regarding subsidies, their implementation must be coordinated with other programs for low-income families, such as the current program subsidizing poor household heads with children.

More importantly, guarantees for low-income informal workers could easily be executed following, for instance, the example of Uruguay. In that country, would-be tenants must pay a percentage of the lease to a fund which would guarantee the payments to landlord. Careful design should include a system of benefits (e.g., a promise to reduce the premium paid to the

⁵⁴ Known as the Law of the Convertibility, enacted in March 1991.

⁵⁵ In fact, the PF are funded from the Federal Government budget on an annual basis and implemented through specific accords signed with the provincial governments.

fund) and penalties (e.g., reporting of performance to credit bureau registries). This measure would alleviate the situation of those who cannot demonstrate formal incomes or obtain a third-party guarantee.

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Annex 1. Housing Market by Provinces

Stock of houses by province

Year 2010. In '000

Province	Total houses	Houses		Collective Houses
		Occupied	Unoccupied	
Total	13,835.8	11,317.5	2,494.6	23.6
Buenos Aires city	1,425.8	1,083.0	341.0	1.9
Province of Buenos Aires	5,383.5	4,425.2	952.6	5.8
Greater Buenos Aires	2,998.9	2,653.3	344.0	1.6
Resto of Prov. of Buenos Aires	2,384.7	1,771.9	608.6	4.2
Catamarca	114.0	89.4	24.3	0.4
Chaco	313.0	270.1	42.5	0.4
Chubut	178.8	147.2	30.8	0.9
Córdoba	1,236.0	978.6	253.7	3.7
Corrientes	293.2	248.8	43.8	0.6
Entre Ríos	426.4	357.3	68.3	0.8
Formosa	154.7	130.1	24.3	0.2
Jujuy	196.3	154.9	40.9	0.5
La Pampa	133.5	104.8	28.4	0.3
La Rioja	109.2	86.4	22.6	0.2
Mendoza	539.3	459.6	78.5	1.2
Misiones	330.6	290.3	39.8	0.6
Neuquén	194.6	159.3	34.4	0.9
Río Negro	237.4	190.6	46.0	0.8
Salta	315.9	267.1	48.1	0.8
San Juan	188.9	162.2	26.5	0.3
San Luis	142.4	117.8	24.3	0.3
Santa Cruz	94.4	76.2	17.6	0.6
Santa Fe	1,145.3	948.4	195.3	1.6
Santiago del Estero	242.4	197.9	44.1	0.4
Tierra del Fuego	43.6	36.7	6.7	0.2
Tucumán	396.4	335.8	60.2	0.4

Source: Author's calculations based on 2010 Census.

Stock of houses by province

Year 2010. In Percentage

Province	Total houses	Houses		Collective Houses
		Occupied	Unoccupied	
Total	100.0%	81.8%	18.0%	0.2%
Buenos Aires city	100.0%	76.0%	23.9%	0.1%
Province of Buenos Aires	100.0%	82.2%	17.7%	0.1%
Greater Buenos Aires	100.0%	88.5%	11.5%	0.1%
Resto of Prov. of Buenos Aires	100.0%	74.3%	25.5%	0.2%
Catamarca	100.0%	78.4%	21.3%	0.3%
Chaco	100.0%	86.3%	13.6%	0.1%
Chubut	100.0%	82.3%	17.2%	0.5%
Córdoba	100.0%	79.2%	20.5%	0.3%
Corrientes	100.0%	84.9%	14.9%	0.2%
Entre Ríos	100.0%	83.8%	16.0%	0.2%
Formosa	100.0%	84.1%	15.7%	0.2%
Jujuy	100.0%	78.9%	20.8%	0.3%
La Pampa	100.0%	78.5%	21.3%	0.3%
La Rioja	100.0%	79.1%	20.7%	0.2%
Mendoza	100.0%	85.2%	14.6%	0.2%
Misiones	100.0%	87.8%	12.0%	0.2%
Neuquén	100.0%	81.9%	17.7%	0.5%
Río Negro	100.0%	80.3%	19.4%	0.3%
Salta	100.0%	84.5%	15.2%	0.2%
San Juan	100.0%	85.8%	14.0%	0.2%
San Luis	100.0%	82.7%	17.1%	0.2%
Santa Cruz	100.0%	80.7%	18.7%	0.6%
Santa Fe	100.0%	82.8%	17.1%	0.1%
Santiago del Estero	100.0%	81.6%	18.2%	0.2%
Tierra del Fuego	100.0%	84.2%	15.3%	0.5%
Tucumán	100.0%	84.7%	15.2%	0.1%

Source: Author' s calculations based on 2010 Census.

Stock of houses by province

Year 2010. In Percentage

Province	Total houses	Houses		Collective Houses
		Occupied	Unoccupied	
Total	100.0%	100.0%	100.0%	100.0%
Buenos Aires city	10.3%	9.6%	13.7%	7.9%
Province of Buenos Aires	38.9%	39.1%	38.2%	24.3%
Greater Buenos Aires	21.7%	23.4%	13.8%	6.7%
Resto of Prov. of Buenos Aires	17.2%	15.7%	24.4%	17.7%
Catamarca	0.8%	0.8%	1.0%	1.6%
Chaco	2.3%	2.4%	1.7%	1.6%
Chubut	1.3%	1.3%	1.2%	3.6%
Córdoba	8.9%	8.6%	10.2%	15.9%
Corrientes	2.1%	2.2%	1.8%	2.5%
Entre Ríos	3.1%	3.2%	2.7%	3.3%
Formosa	1.1%	1.1%	1.0%	1.0%
Jujuy	1.4%	1.4%	1.6%	2.1%
La Pampa	1.0%	0.9%	1.1%	1.5%
La Rioja	0.8%	0.8%	0.9%	0.9%
Mendoza	3.9%	4.1%	3.1%	5.1%
Misiones	2.4%	2.6%	1.6%	2.5%
Neuquén	1.4%	1.4%	1.4%	3.7%
Río Negro	1.7%	1.7%	1.8%	3.3%
Salta	2.3%	2.4%	1.9%	3.2%
San Juan	1.4%	1.4%	1.1%	1.2%
San Luis	1.0%	1.0%	1.0%	1.3%
Santa Cruz	0.7%	0.7%	0.7%	2.3%
Santa Fe	8.3%	8.4%	7.8%	6.9%
Santiago del Estero	1.8%	1.7%	1.8%	1.7%
Tierra del Fuego	0.3%	0.3%	0.3%	0.9%
Tucumán	2.9%	3.0%	2.4%	1.6%

Source: Author's calculations based on 2010 Census.

Detailed tenure condition in urban areas

2010 – In ‘000

	Owner	Tenant	Occupant	Others	Total	
Owner of the house and of the lot.	5,037.5				5,037.5	64.9%
Owner of the house but not the lot.	319.8				319.8	4.1%
Tenant		1,431.7			1,431.7	18.4%
Occupant paying taxes and small expenses			289.6		289.6	3.7%
House provided by the employer			68.2		68.2	0.9%
Occupant with permission			448.6		448.6	5.8%
Occupant without permission			41.8		41.8	0.5%
Under succession				77.9	77.9	1.0%
Other not specified				17.9	17.9	0.2%
Don't know/ N. A.			2.5	31.3	33.9	0.4%
Total	5,357.3	1,431.7	850.6	127.2	7,766.8	100.0%
In %	69.0%	18.4%	11.0%	1.6%	100.0%	

Source: Author's calculations based on EPH 2010.

Annex 2.1. Data Sources

Rental Values, Household and House Characteristics

This study uses the dataset of the National Survey of Household Expenditure and Income (ENGH in Spanish) collected in 1996/1997. This national survey sample included households living in urban areas in cities larger than 5,000 inhabitants (according to the National Census of 1991). The sample was designed to cover 114 cities representing 28 million persons, equivalent to 96 percent of the urban population. The database reports data at the household level, dividing the country into six regions and 12 sub-regions. These 12 sub-regions can be used as Metropolitan Statistical Areas (MSAs) in our estimation.

The ENGH sample size covers almost 27,000 households. The survey contains information on the following characteristics:

1. Household head characteristics: age, education level, gender, marital status, activity condition, type of job, etc.
2. Household attributes: household size, income, level and composition of expenditures, housing expenses, including payments for domiciliary infrastructure and maintenance outlays.

3. Housing characteristics: tenure status, number of rooms and bathrooms, connections to utilities, etc.
4. Housing quality: outside wall materials, types of floors, roof material, etc.
5. Services in the neighborhood: paved street, street lights, running water, sewerage, and garbage collection.

The other source of information is the Permanent Households Survey (EPH in Spanish), collected quarterly. The last available dataset is from the fourth quarter of 2010. It is a public survey collected by the National Bureau of Statistics and Census (INDEC) reporting on the labor situation and income of individuals and households for 31 urban agglomerations (metropolitan areas). EPH database include around 129,000 individuals in 37,000 households representing the whole urban population of the country.

Market Rental Values and House Prices

- Department of Statistics of the Buenos Aires city Government (CEDEM). Data by neighborhoods.
- Toribio Achaval Real Estate (Buenos Aires city)
- Instituto de Estadística y Registro de la Industria de la Construcción (house prices of new units in the Buenos Aires city, Greater Buenos Aires, Mendoza, Tucuman and Santa Fe).

Annex 2.2. Tenure Conditions in Urban Areas

Tenure condition by Agglomerate: urban areas, Year 2010, Ordered by size

Urban agglomerates	Owners	Tenants	Occupants	Others	Total	Ownership rate	Rental rate	% Tenants
Greater Buenos Aires	2,171,349	389,991	397,616	41,427	3,000,383	72.4	13.0	27.24
Buenos Aires city	730,439	309,530	109,822	22,134	1,171,925	62.3	26.4	21.62
Greater Córdoba	255,638	122,649	53,507	5,315	437,109	58.5	28.1	8.57
Greater Rosario	296,101	86,362	31,207	4,358	418,028	70.8	20.7	6.03
Greater Mendoza	169,694	59,569	25,198	5,754	260,215	65.2	22.9	4.16
Greater La Plata	181,845	55,069	18,308	2,170	257,392	70.6	21.4	3.85
Mar del Plata - Batán	148,518	44,719	30,814	2,976	227,027	65.4	19.7	3.12
G. Tucumán - Taíí Viejo	145,626	39,540	27,676	10,552	223,394	65.2	17.7	2.76
Greater Santa Fe	119,219	27,558	10,353	2,343	159,473	74.8	17.3	1.92
Salta	81,203	35,110	18,842	3,775	138,930	58.4	25.3	2.45
Gran San Juan	86,372	18,002	14,496	4,661	123,531	69.9	14.6	1.26
Bahía Blanca - Cerri	73,305	27,521	9,456	716	110,998	66.0	24.8	1.92
Greater Resistencia	87,116	13,314	5,616	3,243	109,289	79.7	12.2	0.93
Corrientes	70,284	19,353	8,618	1,698	99,953	70.3	19.4	1.35
Santiago del Estero	80,934	7,236	3,789	2,520	94,479	85.7	7.7	0.51
Posadas	62,660	12,460	11,058	950	87,128	71.9	14.3	0.87
Greater Paraná	62,154	14,122	6,954	1,876	85,106	73.0	16.6	0.99
Neuquén - Plottier	56,699	18,399	6,749	1,545	83,392	68.0	22.1	1.29
Jujuy - Palpalá	54,478	12,062	11,928	1,091	79,559	68.5	15.2	0.84
Formosa	47,182	6,997	5,679	714	60,572	77.9	11.6	0.49
San Luis - El Chorrillo	41,829	12,352	4,108	1,317	59,606	70.2	20.7	0.86
San Nicolás - Villa Constitución	44,195	8,110	5,803	493	58,601	75.4	13.8	0.57
Río Cuarto	36,686	16,715	2,885	373	56,659	64.7	29.5	1.17
Greater Catamarca	42,187	5,546	3,381	674	51,788	81.5	10.7	0.39
La Rioja	34,382	8,203	3,994	1,681	48,260	71.2	17.0	0.57
Comodoro Rivadavia	27,720	12,620	5,347	442	46,129	60.1	27.4	0.88
Concordia	34,105	6,740	4,144	544	45,533	74.9	14.8	0.47
Santa Rosa - Toay	28,052	10,848	2,405	186	41,491	67.6	26.1	0.76
Rawson - Trelew	28,838	7,075	4,415	666	40,994	70.3	17.3	0.49
Ushuaia - Río Grande	24,431	9,420	2,258	213	36,322	67.3	25.9	0.66
Río Gallegos	15,342	10,790	2,561	232	28,925	53.0	37.3	0.75
Viedma - C. de Patagones	18,683	3,767	1,644	517	24,611	75.9	15.3	0.26
Total	5,357,266	1,431,749	850,631	127,156	7,766,802	69.0	18.4	100.0

Source: Author's calculations based on EPH 2010.

Housing tenure categories by income deciles
In thousands and percentage
Income measure by the total family income *per capita*

Income decile	Owners	Renters	Occupants	Other conditions	Total	Distribution of renters
1st (poorest)	59.5%	17.0%	21.7%	1.9%	100.0%	9.2%
2nd	66.6%	15.8%	15.5%	2.2%	100.0%	8.6%
3rd	66.5%	17.3%	14.5%	1.6%	100.0%	9.4%
4th	72.0%	14.2%	10.8%	3.0%	100.0%	7.7%
5th	75.7%	13.5%	9.8%	1.0%	100.0%	7.3%
6th	70.5%	18.4%	10.2%	0.9%	100.0%	10.0%
7th	72.6%	19.7%	6.2%	1.5%	100.0%	10.7%
8th	69.8%	20.6%	8.1%	1.6%	100.0%	11.2%
9th	69.0%	23.4%	5.9%	1.7%	100.0%	12.7%
10th (richest)	68.5%	24.3%	6.3%	0.9%	100.0%	13.2%
Households (*000)	5,326	1,420	839	126	7,712	100.0%

Source: Author's calculations based on EPH 2010.

Housing tenure categories by income deciles
In thousands and percentage
Income measure by the total family income

Income decile	Owners	Renters	Occupants	Other conditions	Total	Distribution of renters
1st (poorest)	62.2%	15.3%	18.5%	3.9%	100.0%	8.3%
2nd	65.8%	17.3%	13.6%	3.3%	100.0%	9.4%
3rd	65.5%	20.1%	13.6%	0.8%	100.0%	10.9%
4th	63.2%	19.1%	15.8%	1.9%	100.0%	10.4%
5th	68.0%	19.0%	11.4%	1.6%	100.0%	10.3%
6th	69.2%	20.4%	9.3%	1.0%	100.0%	11.1%
7th	68.8%	20.6%	9.6%	1.0%	100.0%	11.2%
8th	71.8%	20.3%	7.0%	0.9%	100.0%	11.0%
9th	74.2%	18.1%	6.3%	1.5%	100.0%	9.8%
10th (richest)	82.0%	14.0%	3.6%	0.4%	100.0%	7.6%
Households (*000)	5,326	1,420	839	126	7,712	100.0%

Source: Author's calculations based on EPH 2010.

Housing tenure condition by level of formal education

Year 2010

In '000

Maximum education reached by the HH	Owner	Tenant	Occupant	Other	Total	Distribution	
						Tenants	Total
Up to primary school	2,072.4	249.6	349.4		2,711		
				39.9		17.4%	34.9%
Up to secondary school	1,785.7	564.4	357.4	51.1	2,759	39.4%	35.5%
Up to university level	1,431.2	615.4	134.4	36.1			
					2,217	43.0%	28.5%
No education		2.3	9.4	0.2	80		
	68.0					0.2%	1.0%
Total		1,432	851	127	7,767		
	5,357					100.0%	100.0%

Source: Author's calculations based on EPH 2010.

Housing Tenure by age groups

Age of the HH

Year 2010

Age group	Distribution (%)				Total ('000)	Tenants (%)	Total HH (%)
	Owner	Tenants	Occupants	Others			
>=15 & <20	34.8%	41.6%	21.9%	1.7%	33.8	1.0%	0.4%
>=20 & <25	28.8%	50.2%	19.6%	1.4%	246.4	8.6%	3.2%
>=25 & <30	35.8%	48.2%	14.8%	1.2%	497.1	16.8%	6.4%
>=30 & <35	49.6%	34.1%	14.9%	1.4%	804.2	19.1%	10.4%
>=35 & <40	58.5%	26.2%	14.6%	0.7%	792.6	14.5%	10.2%
>=40 & <45	64.4%	18.7%	15.0%	1.9%	767.0	10.0%	9.9%
>=45 & <50	72.5%	13.3%	11.6%	2.6%	759.3	7.1%	9.8%
>=50 & <55	77.9%	12.2%	7.9%	2.0%	696.7	6.0%	9.0%
>=55 & <60	79.0%	10.4%	8.5%	2.2%	759.0	5.5%	9.8%
>=60 & <65	82.0%	8.3%	7.8%	1.9%	647.0	3.8%	8.3%
>=65 & <70	85.0%	7.1%	6.7%	1.3%	559.4	2.8%	7.2%
>=70	86.5%	5.9%	6.3%	1.4%	1,204.4	5.0%	15.5%
Total ('000)	5,357.3	1,431.7	850.6	127.2	7,766.8	100.0%	100.0%

Source: Author's calculations based on EPH 2010.

Housing Tenure and labor market participation

Year 2010

Urban areas

Labor market status	Owners	Tenants	Occupants	Other	Total ('000)	Tenants (%)	Total HH (%)
Employed	64.7%	21.8%	11.7%	1.8%	5,289	80.7%	68.1%
Unemployed	59.0%	20.8%	17.6%	2.6%	223	3.2%	2.9%
Non participants	80.1%	10.2%	8.5%	1.1%	2,251	16.1%	29.0%
Total ('000)	5,355	1,431	850	127	7,763	100.0%	100.0%

Source: Author's calculations based on EPH 2010.

Housing tenure and marital status

Year 2010

Urban areas

Marital status	Owners	Tenants	Occupants	Other	Total ('000)	Tenants (%)	Total HH (%)
Married	70.6%	17.2%	10.8%	1.3%	4,688	56.5%	60.4%
Divorced	64.9%	18.7%	13.3%	3.0%	949	12.4%	12.2%
Widowed	84.9%	6.1%	7.6%	1.5%	1,020	4.3%	13.1%
Single	50.8%	34.5%	12.5%	2.2%	1,111	26.8%	14.3%
Total ('000)	5,357	1,432	851	127	7,767	100.0%	100.0%

Source: Author's calculations based on EPH 2010.

Housing tenure and genre

Year 2010

Urban areas

Genre	Owners	Tenants	Occupants	Other	Total ('000)	Tenants (%)	Total HH (%)
Male	68.8%	18.5%	11.4%	1.4%	5,039	65.0%	64.9%
Female	69.3%	18.4%	10.1%	2.2%	2,728	35.0%	35.1%
Total ('000)	5,357	1,432	851	127	7,767	100.0%	100.0%

Source: Author's calculations based on EPH 2010.

Housing tenure and type of house

Year 2010

Urban Areas

	Owners	Tenants	Occupants	Others	Total ('000)	Tenants (%)	Total HH (%)
Detached house	76.7%	11.3%	10.3%	1.7%	5,296	41.9%	68.2%
Apartment	53.8%	32.2%	12.5%	1.5%	2,382	53.5%	30.7%
Tenement house	3.7%	88.3%	8.0%	0.0%		3.6%	0.8%
					59		
Boarding house/ Hotel rooms	2.7%	97.3%	0.0%	0.0%		0.9%	0.2%
					13		
Place not built for housing	74.0%	12.2%	10.1%	3.7%		0.0%	0.0%
					3		
Others	55.2%	11.6%	33.2%	0.0%		0.1%	0.2%
					14		
Total ('000)		1,432		127	7,767	100.0%	100.0%
	5,357		851				

Source: Author's calculations based on EPH 2010.

Annex 2.3. Rental Values by Agglomerates

Rents as a share of household income

1996-1997 – In pesos

	Rents (a)	Income (b)	(a) / (b) %
Buenos Aires city	389.8	1,559.6	25.0
Greater Buenos Aires	328.3	1,173.0	28.0
Córdoba and La Pampa	248.2	1,113.8	22.3
Santa Fe and Entre Ríos	239.9	945.3	25.4
Rest of Prov. Buenos Aires	249.5	943.8	26.4
Jujuy, Salta and Tucumán	223.1	946.1	23.6
La Rioja, Catamarca and Sgo del Estero	241.7	1,047.2	23.1
Misiones and Corrientes	223.0	926.2	24.1
Chaco and Formosa	225.4	1,106.8	20.4
San Juan, Mendoza and San Luis	247.0	1,000.7	24.7
Neuquén and Río Negro	280.5	1,168.6	24.0
Chubut, Santa Cruz and T. del Fuego	335.3	1,589.3	21.1
All regions	296.6	1,178.7	25.2

Source: Author's calculations based on ENGH 1996-1997.

Rents as a share of household income, 2010 – In pesos. Rents adjusted by CPI Rents

	Rents (a)	Income (b)	(a) / (b) %
Buenos Aires city	762.4	4,782.5	15.9
Greater Buenos Aires	642.0	4,706.4	13.6
Córdoba and La Pampa	485.5	4,954.8	9.8
Santa Fe and Entre Ríos	469.1	4,100.1	11.4
Rest of Prov. Buenos Aires	488.0	3,829.5	12.7
Jujuy, Salta and Tucumán	436.3	4,024.8	10.8
La Rioja, Catamarca and Sgo del Estero	472.8	3,674.4	12.9
Misiones and Corrientes	436.1	3,514.9	12.4
Chaco and Formosa	440.9	4,245.6	10.4
San Juan, Mendoza and San Luis	483.2	4,063.8	11.9
Neuquén and Río Negro	548.7	5,224.3	10.5
Chubut, Santa Cruz and T. del Fuego	655.9	7,990.7	8.2
All regions	580.1	4,467.1	13.0

Source: See main text.

Rents as a share of household income

2010 – In pesos. Rents adjusted by the Construction Costs Index

	Rents (a)	Income (b)	(a) / (b) %
Buenos Aires city	1,665.1	4,782.5	34.8
Greater Buenos Aires	1,402.1	4,706.4	29.8
Córdoba and La Pampa	1,060.3	4,954.8	21.4
Santa Fe and Entre Ríos	1,024.5	4,100.1	25.0
Rest of Prov. Buenos Aires	1,065.7	3,829.5	27.8
Jujuy, Salta and Tucumán	952.8	4,024.8	23.7
La Rioja, Catamarca and Sgo del Estero	1,032.6	3,674.4	28.1
Misiones and Corrientes	952.5	3,514.9	27.1
Chaco and Formosa	962.9	4,245.6	22.7
San Juan, Mendoza and San Luis	1,055.3	4,063.8	26.0
Neuquén and Río Negro	1,198.4	5,224.3	22.9
Chubut, Santa Cruz and T. del Fuego	1,432.4	7,990.7	17.9
All regions	1,266.8	4,467.1	28.4

Source: See main text.

Rents as a share of household income

2010 – In pesos. Rents adjusted by Property prices

	Rents (a)	Income (b)	(a) / (b) %
Buenos Aires city	2,126.2	4,782.5	44.5
Greater Buenos Aires	1,877.2	4,706.4	39.9
Córdoba and La Pampa	1,297.9	4,954.8	26.2
Santa Fe and Entre Ríos	1,230.1	4,100.1	30.0
Rest of Prov. Buenos Aires	1,389.4	3,829.5	36.3
Jujuy, Salta and Tucumán	1,242.2	4,024.8	30.9
La Rioja, Catamarca and Sgo del Estero	1,346.2	3,674.4	36.6
Misiones and Corrientes	1,241.8	3,514.9	35.3
Chaco and Formosa	1,255.3	4,245.6	29.6
San Juan, Mendoza and San Luis	1,142.7	4,063.8	28.1
Neuquén and Río Negro	1,562.3	5,224.3	29.9
Chubut, Santa Cruz and T. del Fuego	1,551.2	7,990.7	19.4
All regions	1,615.4	4,467.1	36.2

Source: See main text.

Rental expenses as % of total household's income

1996-1997

	1st Quintile	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile	Total
Buenos Aires city	34.0	26.1	28.3	26.2	20.3	25.0
Greater Buenos Aires	49.7	32.5	31.9	27.2	25.1	28.0
Córdoba and La Pampa	45.0	35.7	25.3	26.8	14.5	22.3
Santa Fe and Entre Ríos	38.7	32.7	29.2	26.8	20.8	25.4
Rest of P. of Buenos Aires	55.5	35.3	29.5	27.0	19.0	26.4
Jujuy, Salta and Tucumán	39.9	34.1	24.1	25.9	21.8	23.6
La Rioja, Cat. and S. del Estero	34.1	28.8	29.1	23.4	20.4	23.1
Misiones and Corrientes	31.1	26.2	33.0	27.3	21.6	24.1
Chaco and Formosa	36.4	34.2	30.2	28.8	16.8	20.4
S. Juan, Mendoza and San Luis	48.5	34.0	27.0	28.3	19.3	24.7
Neuquén and Río Negro	41.5	37.4	30.1	24.3	20.2	24.0
Chubut, S. Cruz and T. Fuego	54.4	32.4	28.0	24.5	16.0	21.1
All regions	40.0	30.7	28.9	26.6	20.4	25.2

Rental expenses as % of total household's income**2010 – Adjusted by CPI Rents**

	1st Quintile	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile	Total
Buenos Aires city	14.5	14.6	16.8	14.9	15.9	15.9
Greater Buenos Aires	22.7	14.2	14.2	13.0	13.4	13.6
Córdoba and La Pampa	19.3	13.8	10.2	11.4	7.1	9.8
Santa Fe and Entre Ríos	18.2	14.0	13.2	11.2	9.8	11.4
Rest of P. of Buenos Aires	26.3	15.1	12.2	12.3	10.5	12.7
Jujuy, Salta and Tucumán	16.3	13.2	10.5	11.0	11.5	10.8
La Rioja, Cat. and S. del Estero	16.5	14.7	14.8	12.0	13.0	12.9
Misiones and Corrientes	13.1	12.8	14.1	13.3	12.8	12.4
Chaco and Formosa	17.9	15.2	12.3	13.6	10.1	10.4
S. Juan, Mendoza and San Luis	18.2	13.4	11.3	13.3	11.1	11.9
Neuquén and Río Negro	19.9	13.7	10.7	9.1	10.9	10.5
Chubut, S. Cruz and T. Fuego	17.9	11.8	9.6	9.3	7.2	8.2
All regions	18.0	14.0	13.6	13.1	12.0	13.0

Rental expenses as % of total household's income

2010 – Adjusted by Construction Cost Index

	1st Quintile	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile	Total
Buenos Aires city	31.7	31.9	36.7	32.6	34.6	34.8
Greater Buenos Aires	49.6	31.1	31.0	28.5	29.2	29.8
Córdoba and La Pampa	42.1	30.1	22.2	24.8	15.5	21.4
Santa Fe and Entre Ríos	39.8	30.6	28.9	24.5	21.5	25.0
Rest of P. of Buenos Aires	57.5	33.1	26.6	27.0	22.8	27.8
Jujuy, Salta and Tucumán	35.6	28.8	22.9	23.9	25.2	23.7
La Rioja, Cat. and S. del Estero	35.9	32.1	32.4	26.2	28.5	28.1
Misiones and Corrientes	28.5	28.0	30.8	29.0	28.0	27.1
Chaco and Formosa	39.0	33.2	26.9	29.7	22.0	22.7
S. Juan, Mendoza and San Luis	39.8	29.4	24.7	29.0	24.1	26.0
Neuquén and Río Negro	43.6	29.8	23.3	19.8	23.8	22.9
Chubut, S. Cruz and T. Fuego	39.0	25.8	20.9	20.4	15.7	17.9
All regions	39.4	30.6	29.7	28.5	26.2	28.4

Rental expenses as % of total household's income

2010 – Adjusted by Construction Costs

	1st Quintile	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile	Total
Buenos Aires city	40.5	40.8	46.9	41.6	44.2	44.5
Greater Buenos Aires	66.4	41.6	41.5	38.1	39.1	39.9
Córdoba and La Pampa	51.5	36.8	27.2	30.4	19.0	26.2
Santa Fe and Entre Ríos	47.8	36.8	34.7	29.4	25.8	30.0
Rest of P. of Buenos Aires	75.0	43.1	34.7	35.2	29.8	36.3
Jujuy, Salta and Tucumán	46.4	37.5	29.8	31.2	32.9	30.9
La Rioja, Cat. and S. del Estero	46.9	41.8	42.2	34.2	37.1	36.6
Misiones and Corrientes	37.2	36.5	40.1	37.8	36.6	35.3
Chaco and Formosa	50.8	43.3	35.1	38.7	28.7	29.6
S. Juan, Mendoza and San Luis	43.1	31.8	26.8	31.5	26.1	28.1
Neuquén and Río Negro	56.8	38.9	30.4	25.8	31.0	29.9
Chubut, S. Cruz and T. Fuego	42.3	27.9	22.6	22.1	17.0	19.4
All regions	50.1	39.0	38.0	36.4	33.3	36.2

Total households' income by regions and income groups: accumulated growth (1997 – 2010)

In %

Deciles

	1	2	3	4	5	6	7	8	9	10	Average
Capital Federal	343	371	270	232	239	220	250	238	172	138	207
Conurbano Bonaerense	345	319	326	367	340	337	332	287	310	240	301
Córdoba y La Pampa	303	398	421	394	385	387	349	371	338	278	345
Santa Fe y Entre Ríos	313	317	379	340	306	352	410	340	323	305	334
Resto de Buenos Aires	279	335	360	353	392	353	377	278	278	243	306
Jujuy, Salta y Tucumán	380	379	397	414	354	347	393	340	267	272	325
La Rioja, Catamarca y Sgo del Estero	275	328	285	283	308	262	298	270	268	163	251
Misiones y Corrientes	361	373	293	305	378	345	281	316	291	187	279
Chaco y Formosa	297	300	362	314	431	318	286	333	264	206	284
San Juan, Mendoza y San Luis	359	444	383	404	357	375	307	323	257	231	306
Neuquén y Río Negro	315	300	406	456	463	441	457	392	262	263	347
Chubut, Santa Cruz y T. del Fuego	510	488	386	489	522	434	423	407	378	314	403
All regions	327	340	326	332	321	309	316	284	263	215	279

Source: Author's calculations based on EPH 2010.

Annex 3.1. Methodology to Estimate Rental Values for 2010

An updated calculation of rental expenses as percentage of the families' income necessitates making some assumptions about the trajectory of incomes and rents. For incomes, the last 2010 household survey covering the entire urban area was used. For rents, three hypotheses were developed:

1. Rents follow the item Rents surveyed by the official statistical bureau, INDEC, to measure the CPI.
2. Rents are assumed to follow the construction costs evolution as measured by the official construction cost index.
3. Finally, they can be best approximate by the evolution of the purchase price of new apartments. Also, given that property prices for different localities are only available since 2005, corresponding to new apartments' prices, a direct extrapolation was followed using prices from the Buenos Aires city data (available since 1980 from a different source).

The comparison of the estimated rents to the *actual rents* surveyed by the Government of the Buenos Aires city shows that they are not very far from the true values.

Survey rents in Buenos Aires City
Based on an apartment of 70 square meter

Barrio	January 2010	April 2010	July 2010	October 2010	Average 2010	% Relative to estimated rents (table XX)	
						% Average	% Top decil
Almagro	2,374	2,412	2,622	2,895	2,576	21.1%	1.6%
Balvanera	2,103	2,267	2,345	2,421	2,284	7.4%	-9.9%
Barracas	2,092	2,168	2,118	2,529	2,227	4.7%	-12.1%
Belgrano	3,265	3,240	3,572	3,590	3,417	60.7%	34.8%
Boca	1,831	1,970	2,196	s/d	1,999	-6.0%	-21.1%
Boedo	2,076	2,203	2,840	s/d	2,373	11.6%	-6.4%
Caballito	2,174	2,144	2,333	2,581	2,308	8.5%	-8.9%
Chacarita	s/d	s/d	2,720	s/d	2,720	27.9%	7.3%
Colegiales	2,540	2,761	3,100	2,928	2,832	33.2%	11.8%
Constitución	2,134	2,104	2,396	2,832	2,366	11.3%	-6.6%
Flores	1,883	2,281	2,045	2,260	2,117	-0.4%	-16.4%
Floresta	s/d	s/d	s/d	s/d			
Montserrat	2,648	2,263	2,468	2,713	2,523	18.7%	-0.4%
Nuñez	2,825	2,818	3,392	4,348	3,346	57.4%	32.0%
Palermo	3,661	3,815	3,971	4,087	3,884	82.7%	53.3%
Parque Chacabuco	2,473	1,606	2,264	s/d	2,114	-0.6%	-16.6%
Parque Patricios	2,237	s/d	s/d	s/d	2,237	5.2%	-11.7%
Puerto Madero	5,297	5,645	5,700	5,592	5,558	161.4%	119.4%
Recoleta	3,217	3,435	3,348	3,397	3,349	57.5%	32.2%
Retiro	3,401	3,244	3,370	3,600	3,404	60.1%	34.3%
Saavedra	2,407	s/d	2,501	s/d	2,454	15.4%	-3.2%
San Cristobal	2,098	2,231	2,271	s/d	2,200	3.5%	-13.2%
San Nicolás	2,681	2,891	2,785	2,796	2,788	31.1%	10.0%
San Telmo	2,238	2,732	2,621	2,580	2,543	19.6%	0.3%
Villa Crespo	2,434	2,200	2,307	2,426	2,342	10.1%	-7.6%
Villa del Parque	s/d	s/d	s/d	s/d			
Villa Devoto	s/d	s/d	2,412	s/d	2,412	13.4%	-4.8%
Villa Pueyrredon	s/d	s/d	s/d	s/d			
Villa Urquiza	2,165	2,313	2,382	2,637	2,374	11.7%	-6.3%
Total Ciudad	3,000	3,020	3,159	3,372	3,138	47.6%	23.8%

Source: Author's calculations based on CEDEM.

Annex 3.2. Methodology to Estimate User Cost for Owners

The annual cost of home ownership, the “imputed rent,” is the sum of different components representing costs and benefits. In a simplified way, this annual cost can be explicit as:⁵⁶

$$Cost_t = r_t^F P_t + \omega_t P_t - P_t \tau_t r_t^M + P_t \delta_t - P_t g_{t+1} + P_t \gamma_t$$

where:

$r_t^F P_t$ = the cost of foregone interest that the homeowner could have earned by investing in another safe asset. This one-year cost is calculated as the price of housing P_t times the risk-free interest rate.

$\omega_t P_t$ = the yearly cost of property taxes, calculated as house price times the average property tax rate ω .

$P_t \tau_t r_t^M$ = the tax deductibility of mortgage interest from income taxes using the average tax rate and the average interest rate for mortgage loans. It is an offsetting benefit for owners. In the case of Argentina, this factor must be adjusted taking into account that only a small proportion of the population actually has access to such a type of loan (see Auguste, Bebczuk and Moya, 2010, for a recent estimate of the Argentine mortgage market).

$P_t \delta_t$ = is a measure of maintenance cost using an estimate of the depreciation rate δ_t

$P_t g_{t+1}$ = is the expected capital gain or loss expressed as a proportion of the house price. This value can be approximated using the historical average rate of house value appreciation (depreciation).

$P_t \gamma_t$ = represents an additional risk premium to compensate homeowners for the higher risk of owning the property (e.g., liquidity premium).

Assuming that equilibrium is usually reached, the expected annual cost of owning a house should not exceed the annual cost of renting. This implies a “no arbitrage” condition which states that the renting must be equally as costly as owning a house at equilibrium.

This condition will allow us to re-arrange the terms to express the house prices in terms of rental values. In fact:

⁵⁶ Himmelberg, Mayer and Sinai (2005).

$$Cost_t = R_t = \mu_t P_t$$

where the fraction $\mu_t = (r_t^F + \omega_t - \tau_t r_t^M + \delta_t - g_{t+1} + \gamma_t)$ is the user cost of housing.

Finally, having estimated rental values, house prices will be calculated as:

$$P_t = \frac{R_t}{\mu_t}$$

The data used to estimate the user cost are the following:

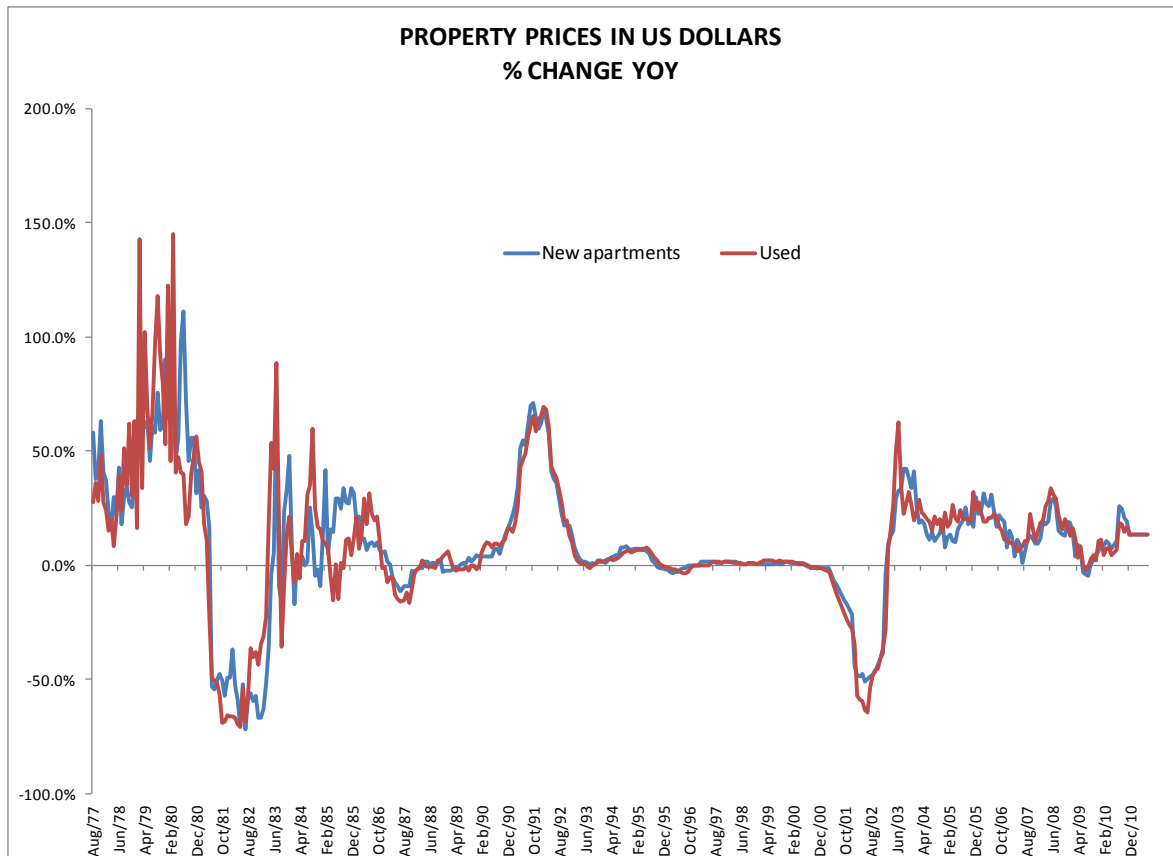
1. Risk-free nominal interest rate: the sum of the 10-year US Treasury bond and the Sovereign Argentine risk premium estimated by JPMorgan. This is the risk-free rate in US dollar and has been converted to domestic currency adding a measure of expected depreciation. The expected depreciation was estimated as the differential between the nominal interest rate for deposits in domestic currency relative to those in dollars. The interest rates are for CD deposits in the Argentine financial system (source: BCRA).
2. Mortgage nominal interest rate average for the financial system (Source: BCRA). Given that only a fraction of buyers leverage their purchases with loans, this percentage of leveraged purchasers was used to make an adjustment (source: Buenos Aires city, CEDEM).
3. The depreciation rate used was of 2.5 percent, as in Himmelberg, Mayer and Sinai (2005).
4. Marginal tax rate of a typical homeowner. Formal tax rates on household incomes range from 9 percent to 35 percent depending on income brackets. Calculations based on information from the national tax agency indicate that the effective income tax on households is about 11.5 percent.⁵⁷
5. Property tax rate. For Buenos Aires city it ranges from 0.5 percent to 1.5 percent of property value. Given the incentives to understate the true value of a house, the lower rate was used.

⁵⁷ Based on the Anuario de Estadísticas Tributarias 2007 with information as of 2006. Administración Federal de Ingresos Públicos (AFIP), www.afip.gob.ar.

6. Risk premium of homeownership. Following Himmelberg, Mayer and Sinai (2005), a figure of 2 percent was used, although the risk premium could be negative considering the hedging property of owning versus renting (Sinai and Souleles, 2005, and Rappaport, 2010).
7. Expected appreciation of house value. The historical average of 3.45 percent annually was used.
8. Expected inflation rate. The 12-month moving average of the current inflation rate as measured by the CPI was used.

The following table summarizes the average value for each component. A big share of the explanation in the evolution of the user cost comes from the risk premium especially since 2001.

	1997-2011	1997-2000	2001-2002	2003-2011
Risk premium	19.5	6.6	36.4	20.4
10 year US Treasury	4.5	5.6	4.8	4.0
Expected depreciation	8.0	2.0	19.9	7.4
Nominal risk free interest rate	34.9	14.5	72.5	33.5
Expected inflation	7.5	-0.4	12.6	9.3
<i>Real risk free interest rate</i>	24.7	15.0	50.2	22.2
Mortgage nominal interest rate	12.2	13.9	12.8	11.4
<i>Mortgage real interest rate</i>	4.9	14.4	1.7	2.0
% Financed purchases	10.3%	20.5%	12.1%	6.2%
User cost	26.1	16.2	51.6	23.7



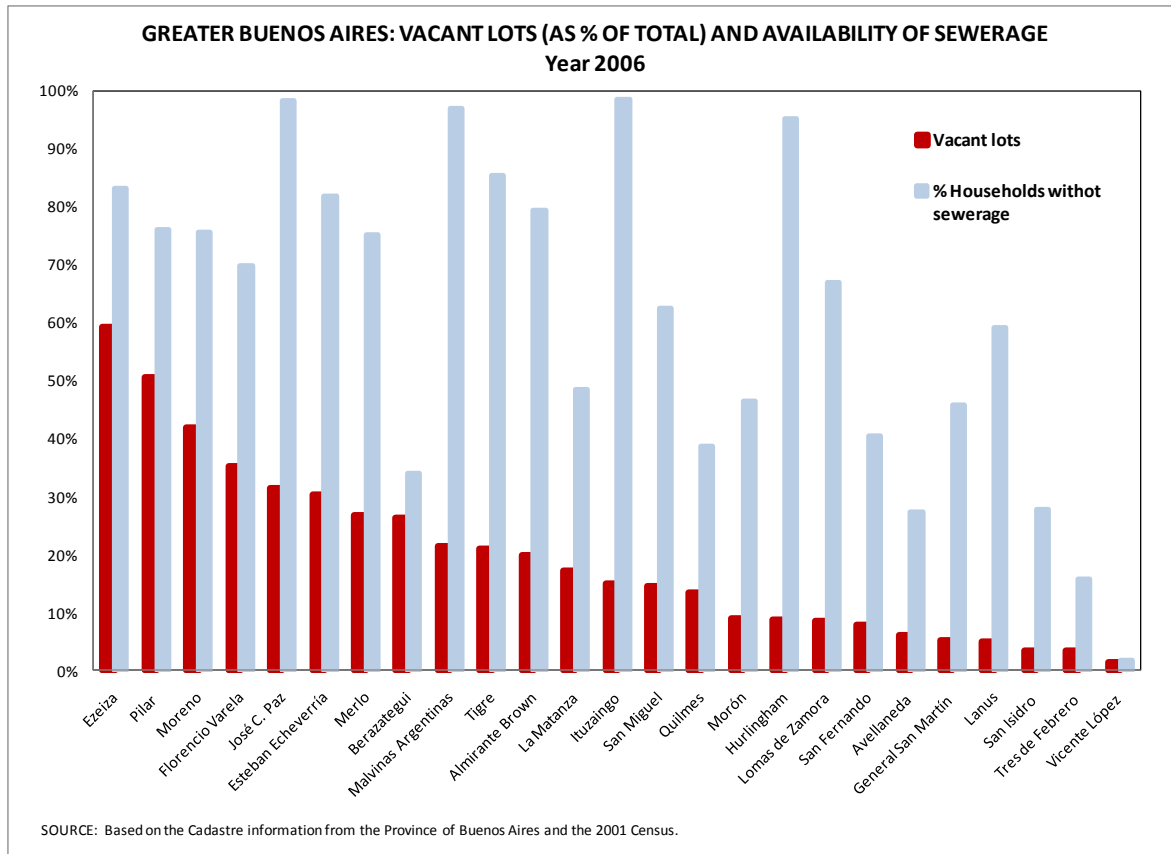
Annex 3.3. Source for Rental Yields in the International Comparison

Rental yields are from the web site Global Property Guide, <http://www.globalpropertyguide.com>, specialized in bringing to international investors information about constraints, expenses and others to purchase a property abroad.

The following characters should be noted:

1. They are gross yields and not net yields. Net yields could be estimated after deducting taxes, maintenance fees and other costs from gross yields.
2. Data are based on web advertisements for upper-end apartments in prestigious areas, such as appeal to foreign renters: offers for sale, and offers for rent, of good (but not new) apartments.
3. The properties are 120-square meter apartments located in major city centers.
4. The gross rental returns (or rental yields) figures published by the Global Property Guide are based on the Global Property Guides own proprietary in-house research.

Annex 4.1. Vacant Land and Infrastructure in the Province of Buenos Aires



Annex 4.2. Construction Costs in Buenos Aires City

Construction costs in the city of Buenos Aires

	Houses		Residential buildings		Total (*)	
	In AR \$	In US \$	In AR \$	In US \$	In AR \$	In US \$
2001	513	513	476	476	477	477
2002	664	211	643	204	642	204
2003	731	246	734	247	702	236
2004	865	292	808	273	768	259
2005	968	330	921	314	867	295
2006	1,102	356	1098	355	1049	339
2007	1,365	435	1273	406	1217	388
2008	1,799	566	1700	535	1597	502
2009 (e)	1,991	532	1,881	503	1,767	472
2010 (e)	2,461	626	2,325	592	2,185	556
2011 (e)	2,955	717	2,792	678	2,623	637

Source: Based on CEDEM, Government of the Buenos Aires city. Excludes the price of the land.

(e) Estimated by the CCI. 2011 according to yoy percentage January - July.

(*) Includes residential buildings, stores, offices, garages, etc.

Annex 4.3. Construction Costs for State Housing Programs

Declared costs of State programs: FONAVI and PF

In AR \$ and in US\$

Type	2009					2001			
	Bedrooms	Total cost	Total	Cost per	Average	Total	Total	Cost per	Average
		in AR \$	cost in US\$	m2 (In US \$)	size	cost in AR \$	cost in US\$	m2 (In US \$)	size
FONAVI									
Free Demand	2	105,822	28,295	533	53.1	20,001	20,001	392.4	51.0
	3	204,106	54,574	722	75.6	28,116	28,116	400.5	70.2
Co - Financed	2	82,449	22,045	372	59.2	17,797	17,797	365.5	48.7
	3	83,789	22,403	330	68.0	26,890	26,890	396.8	67.8
Decentralized	2	49,626	13,269	244	54.4	14,875	14,875	281.0	52.9
	3	75,784	20,263	301	67.4	19,548	19,548	285.4	68.5
Securitization	2	n.d.	n.d.	n.d.	n.d.	38,402	38,402	553.5	69.4
	3	n.d.	n.d.	n.d.	n.d.	41,750	41,750	541.0	77.2
Programas Federales									
Emergencia habitacional	2	62,101	16,604	370	44.82				
Solidaridad habitacional	2	38,841	10,385	214	48.52				
Construcción	3	76,197	20,374	271	75.27				
	2	92,940	24,850	488	50.97				
Plurianual de construcción	3	119,267	31,890	457	69.74				
	2	84,104	2,488	96	56.73				
	3	91,578	24,486	337	72.66				

Source: Based on SSDUV.

Annex 4.4. Land Prices in Buenos Aires City

Land prices in Buenos Aires City			
Area	Neighborhood	Cost per m2	Average size (sq meters)
North- Traditional	Palermo	1865	413
	Total	2098	409
North - Border	Saavedra	943	403
	Total	1231	377
Historic area	Balvanera	1013	476
	San Cristobal	775	322
	Total	1050	456
Other highly demanded	Almagro	1143	412
	Villa Crespo	1052	353
	Villa Urquiza	1038	363
	Caballito	754	732
	Total	922	458
	Agronomia	737	686
West	Flores	866	414
	Parque	854	434
	Chacabuco		
	Mataderos	534	294
	Total	656	577
Near Devoto	Devoto	747	349
	Total	697	459
South	Barracas	702	632
	La Boca	498	465
	Total	590	502
Total	Selected neighborhoods	915	445
	Rest of neighborhoods	918	580
	Total	916	499

Source: Based on CEDEM, Government of Buenos Aires city.

Annex 5. Production of Houses under State Housing Programs by Provinces

PRODUCTION OF COMPLETE UNITS BY PROVINCE

FONAVI AND PROGRAMAS FEDERALES

TOTAL 2003-2009

	FONAVI	PF	Total	% (1)	Population (%) (2)	Difference (1) -(2)
Buenos Aires	13505	36476	49981	18.3%	38.9%	-20.7%
Catamarca	1451	5381	6832	2.5%	0.9%	1.6%
Córdoba	5017	6786	11803	4.3%	8.2%	-3.9%
Corrientes	3177	6671	9848	3.6%	2.5%	1.1%
Chaco	3655	10313	13968	5.1%	2.6%	2.5%
Chubut	3548	5231	8779	3.2%	1.3%	1.9%
Entre Ríos	3409	5572	8981	3.3%	3.1%	0.2%
Formosa	5864	3879	9743	3.6%	1.3%	2.2%
Jujuy	1103	10576	11679	4.3%	1.7%	2.6%
La Pampa	1598	5180	6778	2.5%	0.8%	1.7%
La Rioja	2550	6010	8560	3.1%	0.8%	2.3%
Mendoza	9402	7476	16878	6.2%	4.3%	1.8%
Misiones	8624	7482	16106	5.9%	2.7%	3.1%
Neuquén	2796	1164	3960	1.4%	1.4%	0.1%
Río Negro	1935	3288	5223	1.9%	1.6%	0.3%
Salta	5098	6496	11594	4.2%	3.0%	1.2%
San Juan	4617	8753	13370	4.9%	1.7%	3.2%
San Luis	6851	15	6866	2.5%	1.1%	1.4%
Santa Cruz	5221	2011	7232	2.6%	0.7%	2.0%
Santa Fe	5620	9613	15233	5.6%	8.0%	-2.4%
Sgo.del Estero	7608	6751	14359	5.3%	2.2%	3.1%
Tucumán	2365	6341	8706	3.2%	3.6%	-0.4%
Tierra del Fuego	828	1393	2221	0.8%	0.3%	0.5%
Capital Federal	3340	1262	4602	1.7%	7.2%	-5.5%
Total	109182	164120	273302	100.0%	100.0%	