

# Title: A study of the Brazilian housing policy from an international comparative perspective

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## Abstract:

Provision of public housing to the low-income segments of the population is generally realized through fiscal spending at the central and local levels and financial mechanism (loan/ mortgage system). The financial resource for the latter is often compulsory saving ('compulsory' here is used in a broad sense). Brazil's FGTS (Fundo de Garantia do Tempo de Serviço) and Japan's FILP (Fiscal Investment and Loan Program) are two examples. FGTS is based on 8 percent of workers' wage (paid by the employers) while FILP's main resource is Japan's postal saving system (as post offices work as a large banking network in the country). Effectiveness of mortgage system depends on a variety of factors including macroeconomic environment (especially level of real interest rate), credibility of the borrowers and transparency of the public entity in charge of the system. It may also be affected by the overall level of 'trust' among citizens, companies and banks. The speaker assumes that this level of 'trust' can be partly estimated by the proportional size of money stock (formerly money supply) against GNI or GDP. A large part of money stock is, under the partial reserve system, credit creation by big and small commercial banks. When the trust in the society is weak, money stock would not grow as fast as the central bank expects. This article compares several public loan (credit) systems for mass housing for the poor in both developed and developing countries for the purpose of identifying distinctive features of Brazil's FGTS from an international perspective.

The role of public finance (both central and local) will also be referred to when necessary as supplementary information for the study of public housing. Urban housing will basically be the focus of the discussion. Some of the existing literature on the theme will critically be reviewed along the presentation.

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## 1 Housing deficit in Brazil

### 1-1 Housing 'deficit' (note 1) in Brazil

Localities where quality of life is under the standard level are called as 'subnormal agglomerations' (*aglomerados subnormais*) in Brazil by IBGE, the Brazilian statistics authority at the federal level. One common name in Portuguese for these poor areas with very precarious independent houses (often set up in squatter settlements on hills and on river sides) is *favela*. There are some other names to this type of township such as *comunidade*, *gratão*, *vila*, *mocambo*, etc... (IBGE 2010, Introdução). According to the results of National Census of 2010 published by IBGE (note 2), the number of *favelas* increased in the 2000s when Brazil was experiencing a rapid economic expansion under the new 'leftist' government of PT (Partido de Trabalhadores, Workers Party). One reason for the increase during this growth period is a new survey method called LIT (Lavantamento de Informações Territoriais) which employs a satellite technology with higher-resolution photos in addition to traditional method. Thanks to the combination of new and old methods, more communities were identified in 2010 as subnormal agglomerations (to be referred to as SA after here) than before. Specifically, IBGE identified 15,868 'subnormal census tracts' (setores censitários subnormais) out of the total 317,000 census tracts (15,868 being 5.0 percent of the total). They form 6,329 SAs. This means that one SA is made up of one or more census tracts. About 60 percent of SA are made up of a single census tract while 3.4 percent of SA are made up of 7 to 10 census tracts. 55.5 percent of SA are found in *Sudeste* (South-East), one of the five macro regions of Brazil, where São Paulo and Rio de Janeiro are located (IBGE 2010, 30). 52.5 percent of SA are on flat land while 26.8 percent are on moderate sloping land and 20.7 percent on steep sloping land (IBGE 2010, 29-32). "Sloping land" in the Brazilian social context can mean that the township started as an illegal squatter settlement on a hillside.

There were about 6.5 million people living in SA or *favelas* in 2000. The number soared to 11.4 million in 2010, an increase of 175 percent. I would refrain from getting into the question of what factors contributed to this increase other than the change in survey method, because the question is complex (note 3). The biggest *favelas* in Brazil according to an article of one major Brazilian business weekly journal *EXAME* are listed in Table 1 below. Rocinha at the top is an old, internationally well known town.

Table 1 Some of the biggest *favelas* in Brazil today

Ranking	Name of the favela, name of the city (name of the State)	Number of Residents(A)	Number of households (B)	Household size (C=A/B)	Number of households with access to sewage system (D)	D/B times 100 (percent)
1	Rocinha, Rio de Janeiro (RJ) (*1)	69,356 (180,000) (*2)	23,404 (60,811) (*3)	2.96 (2.96)	-	-
2	Sol Nascente (Ceilândia), Brasília (Distrito Federal)	56,483	15,737	3.59	991	6.3
3	Rio das Pedras, Rio de Janeiro (RJ)	54,793	18,700	2.93	13,105	70.1
5	Baixas da Estrada Nova Jurunas, Belém(PA)	53,129	12,666	4.19	7,379	58.3
6	Casa Amarela, Recife (PE)	53,030	15,215	3.49	2,937	19.3
8	Paraisópolis, São Paulo (SP)	42,826	13,071	3.28	11,612	88.8
9	Cidade de Deus, Manaus (AM)	42,476	10,559	4.02	1,265	12.0
10	Heliópolis, São Paulo (SP)	41,118	12,105	3.40	11,415	94.3

Notes:

\*1 The numbers for Rocinha is taken directly from the statistics of *Censo 2010* of IBGE.

\*2 The population of 180,000 in the parenthesis for Rocinha is an unofficial estimate according to a BBC news, available here: <http://www.bbc.com/news/world-latin-america-27635554> Another source gives an estimate of 300,000. The actual population could be larger than the IBGE's official data for all *favelas* listed here, but the author has no means to verify such unofficial data.

\*3 The number was given by dividing 180,000 with 2.96.

Source: Based on the information in an article carried in *EXAME* and on *Censo Demográfico 2010* of IBGE.

The URL of the *EXAME*'s article =

<http://exame.abril.com.br/brasil/as-10-maiores-e-mais-impressionantes-favelas-do-brasil>

Let us see the data by Fundação João Pinheiro (FJP) in the State of Minas Gerais, a research institute which functions as one of the centers for the study of urban policy and housing policy of Brazil. There are about 5.43 million units of housing deficit according to the definition of FJP (see Table 2). This is a greater number than the population living in SA of IBGE as it covers not only SA but a part of the formal market houses of lower quality.

Table 3 shows geographical distribution of housing deficit among the states in Brazil. *Sudeste* (South-East) and *Nordeste* (North-East) share a significant part of housing deficit.

Table 2 Housing deficit according to FJP

In or out of market	Supply side	Demand side		Quality of housing	Housing deficit according to FJP
Out of market	Securing construction materials outside of the market/ illegal occupation of land	No purchasing power (therefore not part of effective demand) = basic needs		Precarious quality ( <i>favelas</i> )	Housing Deficit (5.43 million units as of 2014) according to the definition of FJP
In the market	Market or government is the provider.	Vacant or abandoned houses	Effective demand of the segment with purchasing power who cannot afford expensive or good quality houses	Houses of subnormal standard (but offered as commodities)	
		Vacant or abandoned houses	Effective demand of the segment with large purchasing power who can afford to buy normal quality houses or expensive and high quality houses	Houses of the quality equal to or better than the standard level including big mansions of the richest	

Source: Prepared by the author.

Table 3 The top eight states with the largest housing deficit in Brazil

States	Households of housing deficit	Percentage
São Paulo	1,151,263	21.2
Minas Gerais	482,949	8.9
Maranhão	407,626	7.5
Bahia	379,160	7.0
Para	256,212	4.7
Ceará	246,274	4.5
Pernambuco	240,850	4.4
Paraná	226,336	4.2
Brasil	5,430,562	100.0

Source: Extracted from Tabela 3.1 of FJP (2015, 33). The original data is taken from PNAD (National Household Survey) of IBGE.

## 1-2 Prominence of public mechanism of housing credit (mortgage)

Housing is a critical issue in any developed or developing country in both political and economic aspects. Shortage of affordable houses and urban infrastructure can be a source of political discontent of the general public and low-income segments of the population against the government; it can be seen as a symbol of poverty as well as a trigger of political movements towards changing the government. On the economic side, housing market is a significant component of domestic demand and an important variable affecting business cycle. In USA, the collapse

of the sub-prime housing market led to the world-wide financial crisis around 2007 and 2008. In Japan, the market of new houses (newly constructed housing units for individuals) peaked at around 1.7 million in 1989 and then started to decline down to the current level of 0.9 million (for 2016) (note 4). It can possibly decrease to 0.53 million in 2030 (with a dramatic reduction in the number of carpenters along the way) according to an estimate by Daido and Sao, market analysts of a private research institute NRI (Nomura Research Institute) (Daido and Sao 2015). Size of housing market is indeed an important question for Japan's economic development.

Housing policy is one of the pillars of economic policy of 'Welfare State'. Economic policies for providing for public houses to the general mass can be classified into two groups: fiscal policy (example: direct provision of public houses by central and local governments) and financial policy (example: low-interest-rate public mortgage loan). This presentation focuses on the public mechanism of mortgage loan (credit) of several countries with a focus on Brazil and Japan.

One common feature between Brazil and Japan is prominence given to public mechanism of development finance. In Brazil it is based on the resource of compulsory saving called FGTS (Fundo de Garantia do Tempo de Serviço, Service Period Guarantee Fund), a fund based on contribution of 8 percent of wages paid by the employers. Before we delve into the study of this financial mechanism, let us see some background information on credit creation, because housing credit is part of broader credit creation.

## 2 Background information about credit creation in general

### 2-1 Basic facts about credit creation in Brazil and Japan

Loan (credit) is a major part of money stock (money supply). Categories and definitions of money stock are different from country to country, but generally speaking, cash is a small part as far as the economy is run on partial reserve system; it is about five percent in Brazil and in Japan as is seen in Table 4. A major part of money stock is composed of demand deposits (part of M1 in Japan/ ordinary bank deposit is an example), quasi currency (part of M2 in Japan, time deposits is an example) and CD (certificates of deposits, part of M2 in Japan). Many of these are numerals printed on account books in the process of a commercial bank's lending money to the clients. They are created on the basis of 'trust' among economic players. Size of the credit creation (M2 or M3, or even broad money stock) may be seen as a rough proxy for the degree of trust in the formal economy, except for the countries and regions where money stock is extraordinarily large. Housing finance is also based on trust among many players in the market, therefore a study of trust should be part of the analysis of housing policy. Figure 3 ranks 162 countries according to the proportional size of broad money as percentage of GDP for the year 2001. One point to note here is the high position of Japan in Figure 3. It may be partly due to the zero interest rate policy introduced in 1999. The percentage of Japan further rose after 2001 to reach 236.7 % in 2015 (from the same source of Figure 3). This recent growth of broad money is probably attributable to the effects of "Abenomics", a set of economic policies undertaken by Prime Minister Shinaro Abe since 2012.

Table 4 Composition of Money Stock of Brazil and Japan

Brazil	Category	M4	M1	M2	Quotas of depository funds, etc.	Month/ year
	Unit					
	Million real	6,346,800	314,263	2,393,015	2,999,909	June of 2017
	Percentage	100.0	5.0	37.7	47.3	
Japan	Category	<i>Broad Liquidity</i>	<i>Cash (part of M1)</i>	M3	Investment in funds	Month/ year
	Unit					
	Trillion yen	1,704.7	95.9	978.5	335.0	July of 2017
Percentage	100.0	5.6	57.4	19.7		

Sources: Data about Brazil is taken form the following webpage of the Central Bank of Brazil:

<https://www.bcb.gov.br/ingles/economic/seriehistmpamp.asp>

Data about Japan is taken form the following webpage of the Central Bank of Japan:

<https://www.boj.or.jp/statistics/money/ms/index.htm>

Figure 1 Categories of Money Stock in Brazil

M4						
M3					(till October of 2006)	TF including the bonds of the National Treasury
M2			quotas de fundos depositário	Selic registradas no compromissadas		
M1		DP + TED				
PMPP	DV					

Source: Prepared originally by the author based on the information of the following webpage of the Central Bank of Brazil: [https://www.bcb.gov.br/pec/sdds/port/ctasanal\\_setbanc\\_p.htm](https://www.bcb.gov.br/pec/sdds/port/ctasanal_setbanc_p.htm)

Notes: PMPP = papel-moeda em poder do público (cash)

DV = depósitos à vista no sistema bancário (deposits in banks)

DP = depósitos em poupança (saving deposits)

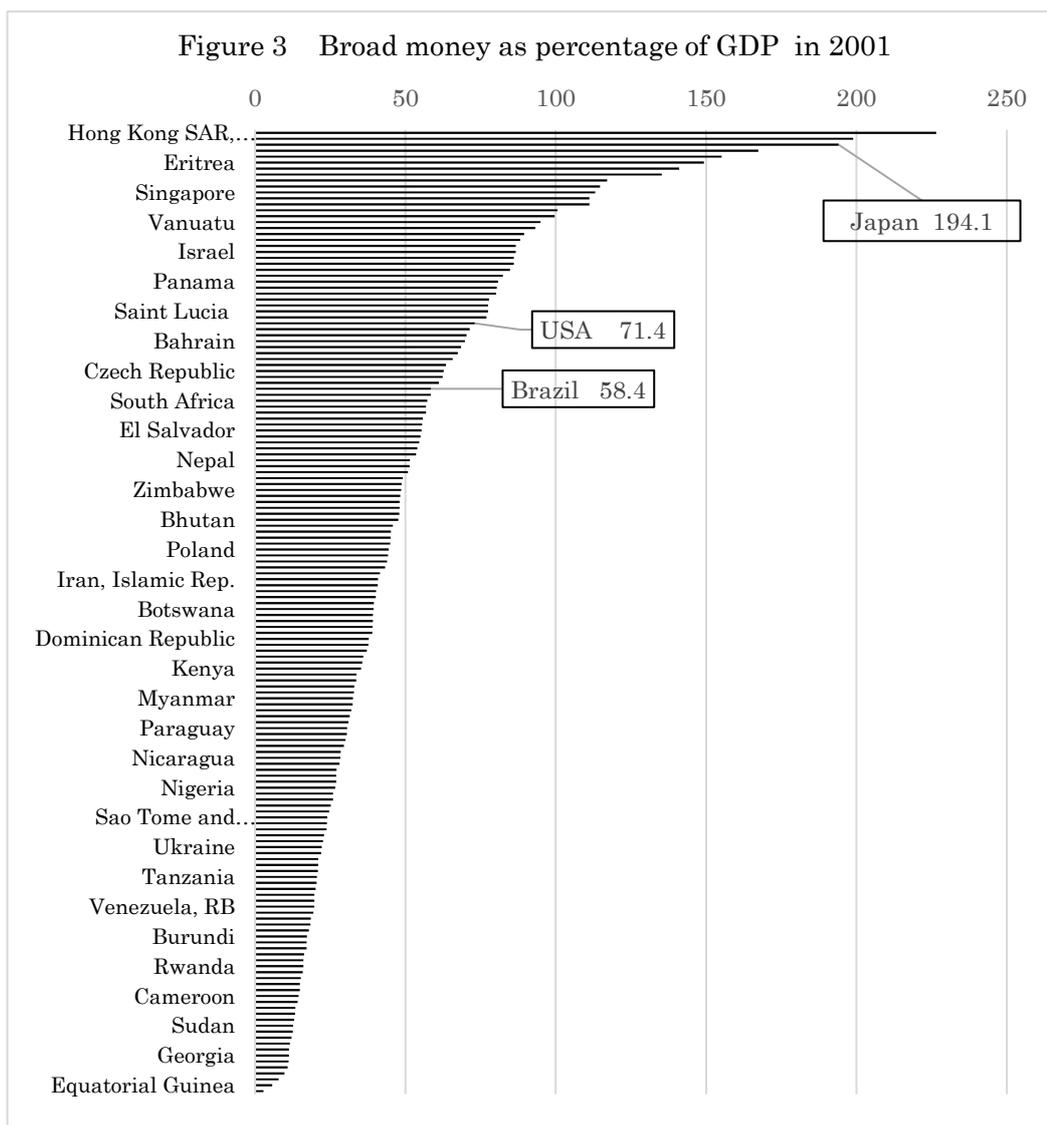
Ted = títulos emitidos por instituições depositárias incluindo depósitos a prazo (bonds issued by depository institutions including time deposits)

TF = títulos federais (federal government's bonds)

Figure 2 Categories of money stock in Japan

Broad Liquidity							
M3				investment in mutual funds	financial bonds, bonds directly issued by banks, CP (commercial paper) issued by financial institutions	Japanese government's bonds	foreign government bonds
M2		deposits in foreign banks	quasi currency + CD (certificate of deposit)				
M1							
cash	deposits	domestic banks	other deposits in banks in				

Source: Prepared by the author based on the information of the following webpage of the Central Bank of Japan: <https://www.boj.or.jp/statistics/money/ms/index.htm>



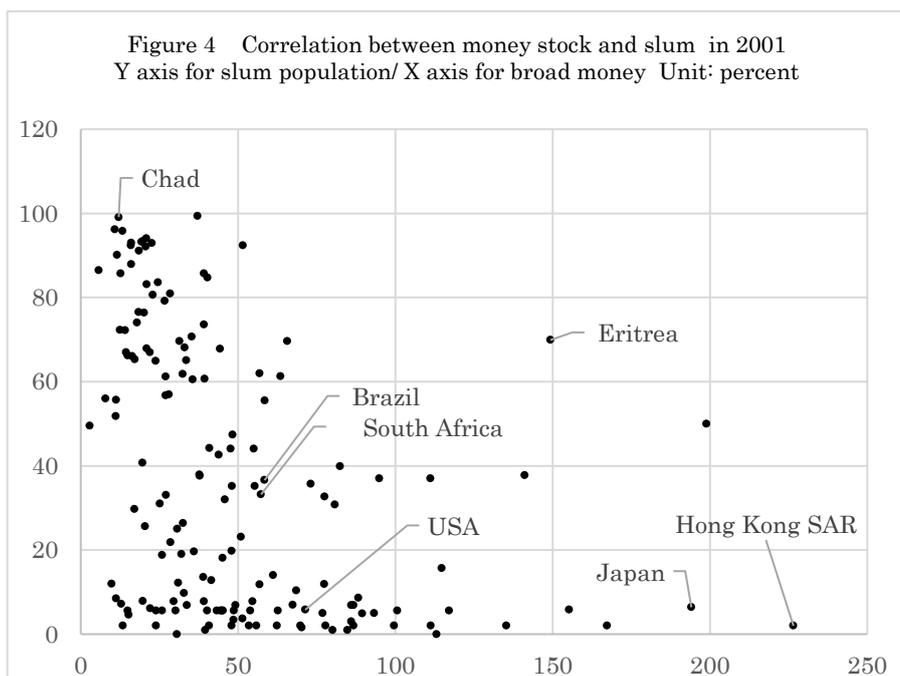
Original note in the excel table of the World Bank: “Broad money (IFS line 35L..ZK) is the sum of currency outside banks; demand deposits other than those of the central government; the time, savings, and foreign currency deposits of resident sectors other than the central government; bank and traveler’s checks; and other securities such as certificates of deposit and commercial paper.”

Note: A total of 162 countries are shown here. Some countries including most of the major European countries are missing from this figure as no data is given for them in the excel file of the World Bank. All numbers are for the year 2001 except for Iraq (data for 2004 is used) and Timor-Leste (data for 2002 is used).

Source: Prepared by the author based on the data of the excel file downloaded from the World Development Indicators site of the World Bank (URL = <https://data.worldbank.org/indicator/FM.LBL.BMNY.GD.ZS?view=chart>)

Figure 4 is a scatter plot of money stock or broad money as % of GDP of 2001 and slum population of 2001 of the 158 countries. Overall correlation coefficient is - 0.408. There is a mild or almost weak negative correlation between the proportional size of broad money and percentage of slum population.

At any rate, a housing problem is full of idiosyncratic elements. Therefore we need to focus on one country to identify these idiosyncratic variables peculiar to a specific country.



Note: A total of 158 countries are plotted out in this figure. Some countries are dropped from the original lists of the World Bank and UN-HABITAT due to difficulty in matching two different sources of data tables completely.

Source: Prepared by the author. As to money stock (broad money), the same source as Figure 3 is used. Percentage of slum population is taken from the tables in Annex 3 of the UN-HABITAT's report *Slums of the World* (UNHABITAT 2003, 76-82).

### 3 Size of public loan system of Brazil and Japan

#### 3-1 FGTS in Brazil

FGTS credits are part of the total credits in Brazil. Let us see the credit data from the Central Bank of Brazil in Table 5. Total size of credit in Brazil in 2014 was R\$ 3,018 billion or 58.9 percent of the GDP. Table 6 shows a budget of FGTS for the year 2015. Ninety-three (93) percent of FGTS credits go to the housing sector with eighty-three (83) percent allocated to the popular housing. Thirty-five (35) percent is allocated to credits to individuals. FGTS looks more 'housing-oriented' than Japan's FILP although FGTS also finances urban infrastructure too. For example, FGTS financed some of the public works for 2014 FIFA's World Cup and 2016 Olympic Games in Rio de Janeiro (news source: FGTS's official website → <http://www.fgts.gov.br/noticias/noticia039.asp>).

Table 5 Recent credit size of Brazil

	2012		2013		2014	
	billion REAL	Percentage vis-à-vis GDP	billion REAL	Percentage vis-à-vis GDP	billion REAL	Percentage vis-à-vis GDP
Pessoas físicas (individuals)	1,074	24.5	1,246	25.7	1,412	27.6
Pessoas jurídicas (legal entities)	1,294	29.5	1,466	30.3	1,606	31.3
Total	2,368	53.9	2,711	56.0	3,018	58.9

Source: Selected from Tabela 1 in Page 8 of *Relatório de Economia Bancária e Crédito 2014* published by the Central Bank of Brazil ([http://www.bcb.gov.br/pec/depep/spread/rebc\\_2014.pdf](http://www.bcb.gov.br/pec/depep/spread/rebc_2014.pdf)).

Table 6 Budget of FGTS in 2015

(unit: thousand Real/ percent)

Programs	Original budget	Final budget (A)	Contracted value (B)	% of total	% of the contracted value of total (B/A*100)
Total housing	56,560,000	72,191,761	65,356,623	93.1	91.0
Total popular housing	55,260,000	62,667,761	58,014,113	82.7	93.0
Pro-Moradia	660,000	-	-	-	-
Apoio a Produção	22,350,000	23,626,329	22,778,935	32.5	96.0
Carta de Crédito Associativa	1,000,000	299,000	52,160	0.1	17.0
Carta de Crédito Individual	22,350,000	26,042,432	24,367,315	34.7	94.0
Carta de Crédito Individual (PMCMV/FAR)	-	500,000	337,079	0.5	67.0
Descontos	8,900,000	8,900,000	7,511,001	10.7	84.0
Descontos (PMCMV/FAR)	-	3,300,000	2,967,623	4.2	90.0
Other housing	1,300,000	9,524,000	7,342,510	10.5	77.0
Op. Especiais - Apoio a Produção	-	750,000	612,047	0.9	82.0
Pro-cotista	600,000	6,674,000	6,135,455	8.7	92.0
Carteiras Administradas	700,000	2,100,000	595,008	0.8	28.0
Total sanitation	7,500,000	5,068,239	2,520,273	3.6	50.0
Saneamento para Todos S. Público	5,700,000	3,000,524	1,487,339	2.1	50.0
Saneamento para Todos S. Privado	1,800,000	2,067,715	1,032,934	1.5	50.0
Total infrastructure	12,000,000	9,000,000	796,546	1.1	9.0
Pro-Transporte	12,000,000	9,000,000	796,546	1.1	9.0
Urban operation consortium	800,000	1,500,000	1,500,000	2.1	100.0
All Total	76,860,000	87,760,000	70,173,442	100.0	80.0

Source: Slightly edited by the author from the Table 5 of the official 2015 report of FGTS (Ministério de Trabalho e Emprego 2016, 42-43)

Original source: Ministry of Cities (Ministério de Cidades)

### 3-1 FILP in Japan

The main source of FILP in Japan is ‘postal saving’ which has been handled by tens of thousands of public post offices (note 5) located in local communities across the country. Most Japanese individuals have deposited their savings both in commercial banks and in post office accounts whose deposit interest rate was often lower than commercial banks in the past. Despite lower deposit interest rate, post offices still enjoyed popularity among general citizens and attracted savings thanks to its ubiquitous nature (easy access) and the safe image (perception of low possibility of bankruptcy because of its governmental or public nature). It may be safe to say that having a post office account has been a way of risk hedge for a large part of the Japanese population. The network of post offices was once the biggest banking system in Japan in the 1980s, bigger than the biggest commercial bank in Japan (then Mitsubishi Bank). Post office was different from commercial banks in the sense that the deposited money was not lent to general clients such as private industrial firms. It was channeled into many public development projects including public mass housing through FILP. The size of FILP was so large that it was once called the “second Japanese government.” The reason for this naming was that the annual budget size was almost the same as the size of national tax revenue. As is shown in Figure 6, it was around 40 trillion yen in the 1990s; the national tax revenue was also around that level. Table 7 shows that FILP was only a little less than the national tax revenue in the 1990s. Take the year 1998, for example. The ratio of FILP to national tax revenue was as high as 84.2 percent in that year. FILP was thus quantitatively prominent in Japan’s development sector till the end of 1990s through the rapid growth period of 1960s and 1970s. Note that FILP was prominent even during the low growth period after 1973/74 when the

rapid growth came to an end because the system was expected to play the role of economic booster in the slowing economy in the 1990s.

Table 7 Comparison between national government’s tax revenue and annual spending of FILP from 1995 to 2015 (Units: billion yen/ percent)

Year	Tax Revenue (A)	FILP (B)	(B)/(A) *100	Year	Tax Revenue (A)	FILP (B)	(B)/(A) *100
1995	54,963.00	44,174.80	80.4	2006	54,116.90	15,004.60	27.7
1996	55,226.10	40,524.70	73.4	2007	52,655.80	14,162.20	26.9
1997	55,600.70	40,905.30	73.6	2008	45,830.90	16,583.80	36.2
1998	51,197.70	43,094.60	84.2	2009	40,243.30	23,911.80	59.4
1999	49,213.90	40,762.80	82.8	2010	43,707.40	18,590.90	42.5
2000	52,720.90	38,074.70	72.2	2011	45,175.40	20,570.00	45.5
2001	49,968.40	32,920.20	65.9	2012	47,049.20	19,043.70	40.5
2002	45,844.20	26,906.40	58.7	2013	51,227.40	19,097.10	37.3
2003	45,369.40	23,411.50	51.6	2014	57,849.20	16,500.70	28.5
2004	48,102.90	20,744.80	43.1	2015	59,969.40	14,943.40	24.9
2005	52,290.50	17,151.80	32.8				

Source: Data of national tax revenue are from the following webpage of the Ministry of Finance:

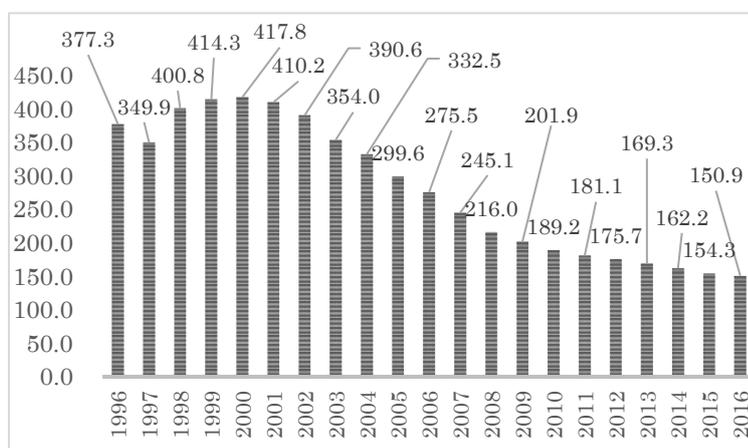
[http://www.mof.go.jp/tax\\_policy/reference/budget\\_explanation/008a29a.pdf](http://www.mof.go.jp/tax_policy/reference/budget_explanation/008a29a.pdf)

Data of FILP between 2007 and 2015 are taken from *FILP Report 2016*, data between 2001 and 2006 are from *FILP Report 2006*, data of 2000 is from *FILP Report 2000*, and data from 1995 to 1999 are from *FILP Report 1999*. Each Report is available at the following webpage of the Ministry of Finance of Japan: [http://www.mof.go.jp/filp/publication/filp\\_report/index.html](http://www.mof.go.jp/filp/publication/filp_report/index.html)

Note: Numbers of FILP are the values of revised ‘general plans’ of each year. Values after implementation are generally a little smaller than the values of the plans. ‘General plans’ here refers to the category of investments in various economic and social activities excluding fund management.

Since around 2001, FILP started to decline both in terms of outstanding balance as well as annual loan (credit) supply (see Figures 5 and 6).

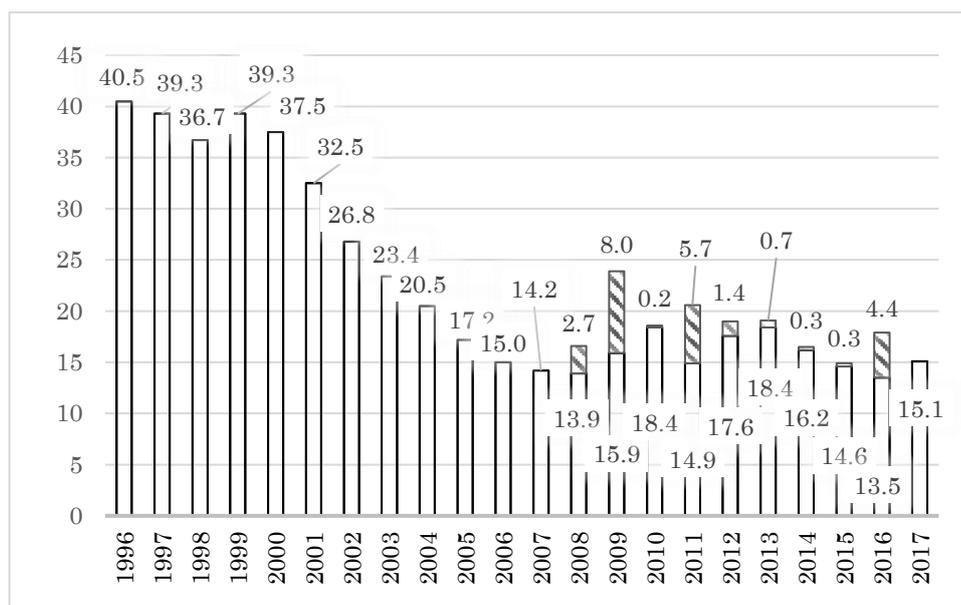
Figure 5 Changes in the size of FILP of Japan in the last 21 years (unit: trillion yen)



Source: Website of the Ministry of finance of the Japanese Government (URL= [http://www.mof.go.jp/filp/reference/filp\\_statistics/zandaka\\_suii.pdf](http://www.mof.go.jp/filp/reference/filp_statistics/zandaka_suii.pdf))

Note: All numbers are the implemented values (not budgetary numbers).

Figure 6 Annual loan (credit) of the FILP of Japan in the last 21 years (unit: trillion yen)



Note: All numbers are the values of the planning stage of each year. The numbers in [ ] after the year Heisei 20 (2008) are the values of revised plans.

Source: Website of the Ministry of Finance of the Japanese Government (URL = [http://www.mof.go.jp/filp/reference/filp\\_statistics/zandaka\\_suii.pdf](http://www.mof.go.jp/filp/reference/filp_statistics/zandaka_suii.pdf))

Three reasons can be identified as follows:

First, in 1997, FILP law was modified to terminate the obligation of channeling postal savings into public development projects through FILP. After this change, the postal system started to look for a new way of managing the post office savings, but the only possible business under the regulation (post office was still a public entity then) was to buy the national government's bonds – a safest option. Buying G-bonds was not profitable enough. In 2005, Prime Minister Jun'ichiro KOIZUMI finally passed a new law to privatize the post office system after winning a land-slide victory in the general lower house election (note 6).

The system became an independent private entity. Postal saving is now faced with a new challenge of how to manage its 200 trillion yen of assets. Currently, 84 trillion yen out of 200 is still invested in national government's bonds whose return is close to zero (Japan is under zero or negative interest rate policy now). FILP on the other hand has lost its main resource, having becoming a self-financing system. In other words, FILP issues 'FILP Bonds' in the stock market to secure necessary funds to finance many public projects. The annual loan (credit) decreased to the level of around 15 trillion yen as is shown in Figure 6. Since 2011 when the North-East Japan was hit by the great earthquake, subsequent tsunami and the severe nuclear accident in Fujishima No.1 Nuclear Plant, additional spending was added to the initial plan each year to promote reconstruction, but it is no longer at the high level of the 1990s or of the previous decades.

Second, demands for public funds shrank partly due to the recognition that Japan has already developed well. Public housing is an example. The problem of squatting and slums have been almost completely solved. We see very few examples of this problem in today's Japan, although there ARE many new challenges in the housing sector including the problem of so many frauds in the market of house renovation (note 7). These new problems will be examined on a different occasion.

Third, access to private credit became easy given low or zero (or even negative) interest rate policy. Under this policy, lending rates are not zero but the average contract lending rate on short-term loans and discounts of all domestically licensed commercial banks (excluding *Shinkin* banks) in Japan is as low as 0.620 percent as of July, 2017 according to the results of monthly survey by the Central Bank of Japan (source: <https://www.boj.or.jp/statistics/dl/loan/yaku/yaku1707.pdf> ). In the 1970s, lending interest rates of the commercial banks were much higher than the lending interest rates of FILP, but today both are low. This also led to less demand for public loan for realizing development projects.

#### 4 Housing policy in Brazil and in Japan

##### 4-1 Housing policy in Brazil

It is a highly challenging task to summarize the housing policy in one country due to the complex nature of the housing problems. It is an integral part of a broader urban policy; summarizing urban policy itself is a big challenge due to its complex and interdisciplinary nature. Here is a limited discussion of the Brazilian housing policy from the viewpoint of economics.

The main focus of the policy in Brazil has been on public and private financial mechanism to promote home ownership. In this regard, the country is close to Japan where home ownership has been the priority for the government's plans as well as for individuals' life plans. It is also close to USA where house ownership has traditionally been a priority. Brazil is different from Japan and USA in two aspects. First of all, due to the high level of interest rate, actual performance of the Brazilian loan system, either public or private, has not been remarkable against the actual huge demand for good quality houses and urban infrastructure. The number of units financed by the Brazilian housing loan system (both FGTS and SBPE) hovered between the low level of 60,000 per year and the higher level of 630,000 per year from 1970 to 2006 (UN-HABITAT 2010, 31) . Given the growing population which has recently reached 200 million, this performance has been rather of moderate nature. Secondly, the role of the government in provision of public collective houses is more limited in Brazil compared to Japan and USA. In Japan, many municipal governments are direct providers of municipal houses; in USA, tax expenditure (one type of fiscal policy) is a major mechanism of social housing provision. A few more words on the housing policy of USA will be added next.

Housing policy in USA can be characterized by the well-developed public and private credit systems represented by the half public institutions called Fannie Mae and Freddie Mac and by the fiscal policy. The fiscal policy's main feature may be employment of tax expenditure such as tax reduction as a means to stimulate housing supply by the private and civic sectors. Use of tax expenditure as instruments for promoting welfare programs is often considered as an example of "hidden welfare state" or more recently of "submerged welfare state" (the connotation of the latter being more critical) . Critics against this approach argue that beneficiaries from tax expenditure policies are middle class or richer segments of the society. Admitting this critical evaluation, Prof. Tetsutaro Okada of Kagawa University in Japan contends that as far as housing policy is concerned, there is a possibility of tax expenditure's benefitting lower income groups in USA (Okada 2016). In his recent presentation at the national meeting of Japan Institute of Public Finance held at Rikkyo University in Tokyo, Okada carefully examines two policies: income tax deduction of mortgage interest and LIHTC (Low-Income Housing Tax Credits) (Okada 2017). As to mortgage interest tax

deduction, Okada concludes that the main beneficiary is the group of individuals in the high income brackets. LIHTC is a system in which a developer (often a non-profit organization in the social context of the USA) receives tax credit. After studying some criticisms against LIHTC (ex: LIHTC benefits investors only) and examining various effects of this policy, he concludes that low-income individuals are benefitting thanks to reduced rents of the houses built in the LIHTC system. Compared to USA, Brazil does not look like a country where tax expenditure is employed to promote social housing. Brazil's main housing policy has been primarily to offer housing credits.

#### 4-2 Housing policy in Japan

In the pre WWII era, the problem of precarious houses in big industrialized cities such as Osaka was very serious, but during the rapid growth periods in the post WWII era, the problems were mostly solved. The fast speed of solving shortage of houses may remind the readers of the case of Singapore, who depended on the compulsory saving system to construct many high rise public condominiums to solve the slum problem very fast. Japan utilized the three systems: the first system was a state organization to construct public houses (mostly high-rise collective houses). The name of the public corporation was Public Corporation for Development of Housing and Cities (*Jutaku Toshi Seibi Kodan*, 日本住宅都市整備公団). The second system was Public Corporation for Housing Finance (*Jutaku Kinyu Kouko*, 日本住宅金融公庫). The third system was local governments' direct provision of municipal houses (both independent and collective types/ mostly rental apartments) called Local Public Houses (*Chiho Koei Jutaku*, 地方公営住宅). In addition to these 'three pillars', many prefectural governments (upper-level in the two-tier local administration system of Japan) and some basic level city governments (lower level in the two-tier local autonomy system) established financially independent public corporations for provision of public houses. They are called Local Corporations for Housing Provision (*Chiho Jutaku Kyoukyu Kosha*, 地方住宅供給公社). They provided for rental apartments as well as houses/apartments for sales. FILP's resources were channeled into *Kodan* (housing construction) and *Kouko* (housing finance) while the third system of local public houses was mainly financed by the general account of the local public finance (therefore ultimately supported by the local tax revenue). The fourth system *Kosha* (Local Corporation) raised their own fund by issuing corporation bonds in the financial market. These three or four pillars worked effectively to promote construction of houses across the country during the rapid growth period (1950 to 1974) as well as in the 1980s and till the mid-1990s.

Around the middle of the 1990s, the three pillar system of housing policy began to undergo a profound change; it almost vanished. Specifically speaking, *Kodan* was restructured into a different institution in 1999 and was finally replaced with UR (Urban Renaissance Agency) in 2004, whose main task now is to manage the house renting business of the exiting stock of apartments built by *Kodan* in the past. *Kouko* was terminated in March 2007 and was replaced with Housing Finance Agency, whose main job is to securitize private housing loans (to manage the MBS [mortgage backed securities] business). The name of the main commodity is FLAT 35 (low interest rate mortgage loan over 35 years of maturity). As to municipal housing, the target is now limited to the aged or low income residents. Municipal governments are no longer a major provider of social housing. It is safe to state that public intervention in the Japanese housing sector has dramatically shrunk since around 2000.

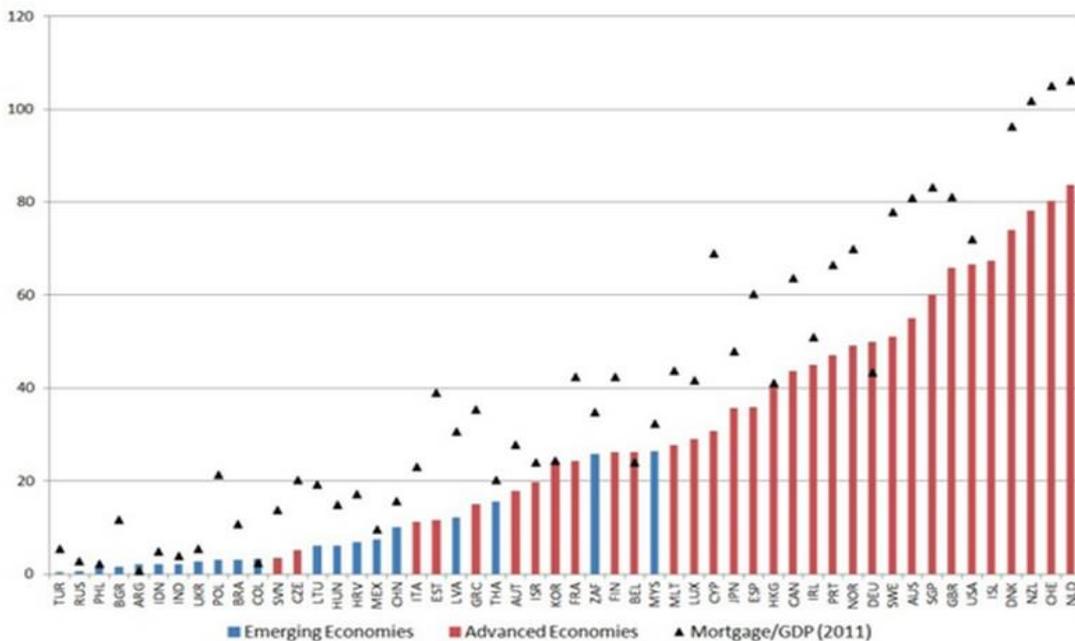
5 Public housing finance mechanism in Brazil and in Japan

5-1 Public housing finance mechanism in Brazil

Our attention this time is paid to SFH/ FGTS, but there is one more important system under SFH which is called SBPE (Sistema Brasileiro de Poupança e Empréstimo, Brazilian System of Saving and Loan)(note 8). FGTS is for social housing while SBPE is for ordinary housing. SBPE has been smaller in the performance of housing credit than FGTS, but it has been an important system of housing finance in Brazil too. According to a presentation by Mr. Luiz Antonio Nogueira de França, President of ABECIP (note 9) during the Second International Conference on Real Estate Loan (Crédito Imobiliário) organized by the Central Bank of Brazil in March of 2010 (held in the City of Fortaleza, State of Ceará, Brazil), credits to real estate market in Brazil under the system of SBPE increased from R\$ 9.3 billion in 2006 to R\$18.3 billion in 2007, R\$30.0 billion in 2008 and R\$ 34.0 billion in 2009 (De França 2010, 3). This was about 4.3 percent compared to GDP. If we add the performance of CEF (Caixa Econômica Federal) that handles both SBPE and FGTS, the percentage rises to 11.5 percent. This is a low level in comparison with other countries in the world. One factor that impedes the deepening of mortgage market in Brazil is the high interest rate (SELIC rate), which was 12 percent in 2002 and was much higher before. Section 6 of this paper focuses on this question.

Let us further check the proportional size of housing credit in Brazil. Figure 7 is taken from an IMF Staff Discussion Note written by Cerutti, Dagherand Dell’Ariccia (Cerutti et al. 2015). I have confirmed that Japan’s data is correct (see a related explanation in Section 5-2). Brazil’s size was less than five percent as the average value for the period between 2001 and 2005, rising to about 10 % in 2011 as shown in Figure 7. Considering various sources, it may be safe to assume that the size of Brazil’s housing loan (balance of the private and public systems, not annual lending) is between 10 % of GDP at the most. The amount of annual lending is naturally much less.

Figure 7 Outstanding balance of housing loan of major countries in the world – for the average balance of 2001-2005 and for the year 2011



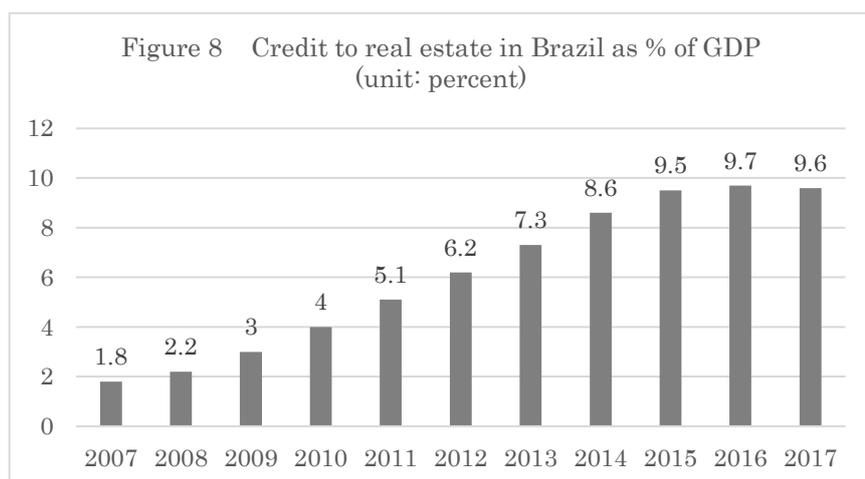
Note: Bars represent the average value for the years between 2001 and 2005 of each country. Triangle marks represent the values for the year 2011 only. The three-letter country codes employed here seem to be the system of Alpha-3 code of ISO 3166 (<https://www.iso.org/iso-3166-country-codes.html>).  
 Source: Figure 2 from Page 7 of the following article: Cerutti, Dagher and Dell’Ariccia (2015)

Let us check the data once more by looking at the information offered by ABECIP. According to a recent press conference data available from their official website, the size of real estate loan against GDP of Brazil for the year 2017 is 9.6 percent (De Abreu Filho 2017). Some selected countries are shown in Table 8.

Table 8 Size of total loan balance to real estate against GDP for the year 2015

Country	Loan balance vis-à-vis GDP (in percent)
England	67.6
USA	62.9
Spain	52.1
South Africa	18.4
Chile	21.4
Mexico	9.9

Source: De Abreu Filho (2017, 21).



Source: De Abreu Filho (2017, 21).

Table 9 shows subdivisions of the credit destinations in Brazil between 2012 and 2014. Out of the total credit extended to individuals in 2014, which was R\$ 1,412 billion, R\$ 160.8 billion was for credit cards (11.4 %), R\$ 184.2 billion was for automobiles (13.0 %) and R\$ 431.6 billion was for real estate (30.6 %). The credit to individuals for real estate market was about 8.4 % of GDP. The same for legal entities was 1.3 %. Together, credit toward real estate market in 2014 was 9.7 % vis-à-vis GDP, a figure compatible to what we examined in the previous section. We can also learn that not only credits to housing but credits either to individuals or legal entities are generally limited in Brazil. Figure 9 shows the growth and the recent decline of real estate credits of both FGTS and SBPN in Brazil. After peaking at 156 billion Real in 2014, the total amount started to fall. This fall is evidently caused by the historically deep recession which Brazil started to face then.

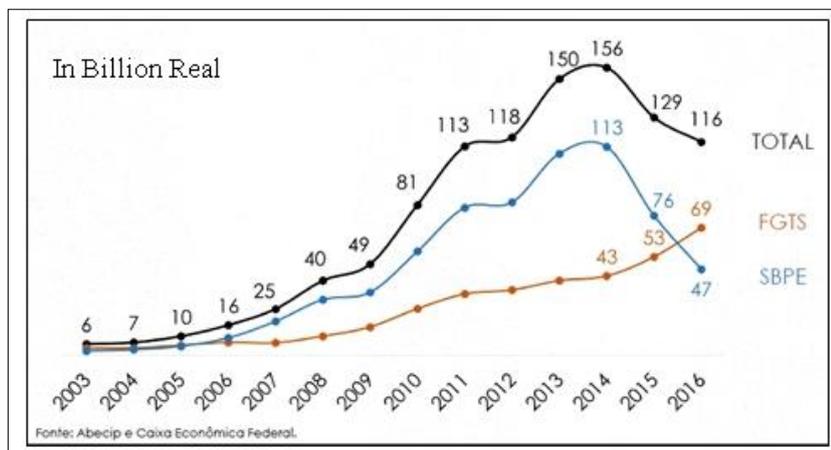
Table 9 Credit size in terms of outstanding balance according to destinations between 2012 and 2014  
in Brazil Units: billion Real, %

Destinations		2012	2013	2014	Composition (2014) in %	% of GDP of 2014	
In Portuguese	English translation						
To individuals	Recursos livres	Free resources	689.3	742.8	783.4	55.5	15.3
	Crédito pessoal	Personal credit	277.0	317.7	353.1	25.0	6.9
	Do qual: consignado	of which: consigned	188.9	221.9	252.2	17.9	4.9
	Aquisição de veículos	Acquisition of automobiles	193.2	192.8	184.2	13.0	3.6
	Cartão de credito	Credit card	126.6	144.6	160.8	11.4	3.1
	Cheque especial	Special check	21.7	23.3	24.5	1.7	0.5
	Demais	Others	70.8	64.4	60.8	4.3	1.2
	Recursos direcionados	Directed resources	384.8	503.1	628.4	44.5	12.3
	BNDES	National Bank for Economic and Social Development	29.2	37.1	43.2	3.1	0.8
	<u>Imobiliário</u>	<u>Real estate</u>	<u>255.4</u>	<u>337.2</u>	<u>431.6</u>	<u>30.6</u>	<u>8.4</u>
	Rural	Rural	94.5	119.1	145.6	10.3	2.8
	Demais	Others	5.7	9.7	8.0	0.6	0.2
	Total to individuals		1074.1	1245.9	1411.8	100.0	27.6
To legal entities	Recursos livres	Free resources	707.3	764	793.8	49.4	15.5
	Capital de giro	working capital	363.6	385.2	392.4	24.4	7.7
	Conta garantida	Guaranteed account	44.1	44	45.5	2.8	0.9
	ACC (Adiantamentos sobre Contratos de Câmbio)	Advances in currency exchange	45.9	42.5	52.5	3.3	1.0
	Financiamentos a exportadores	Financing to exporters	36.9	50.3	57.5	3.6	1.1
	Demais	Others	216.8	242	245.9	15.3	4.8
	Recursos direcionados	Directed resources	586.9	701.5	811.9	50.6	15.8
	BNDES	National Bank for Economic and Social Development	446.7	514.5	595.2	37.1	11.6
	<u>Imobiliário</u>	<u>Real estate</u>	<u>42.9</u>	<u>53.8</u>	<u>66.2</u>	<u>4.1</u>	<u>1.3</u>
	Rural	Rural	50.2	69.6	74.3	4.6	1.5
	Demais	Others	47.1	63.6	76.2	4.7	1.5
Total to legal entities		1294.2	1465.5	1605.7	100.0	31.3	

Note: Underlines are given by the author for emphasis.

Source: Prepared by the author based on the information from Tabela 2 in Page 8 of *Relatório de Economia Bancária e Crédito 2014* published by the Central Bank of Brazil, (URL = [http://www.bcb.gov.br/pec/depep/spread/rebc\\_2014.pdf](http://www.bcb.gov.br/pec/depep/spread/rebc_2014.pdf)).

Figure 9 Annual finance to real estate in Brazil by FGTS and SBPE from 2003 to 2016 (unit: billion Real)



Source: De Abreu Filho (2017, 10).

FGTS credits for the real estate in 2015 was R\$ 53 billion according to Figure 9, and Table 10 shows that FGTS credits to individuals' houses of the same year was about R\$ 24.3 billion, which financed the supply of about 266,000 housing units. About three-fourths (in terms of either housing units or financed value) of these credits was used for acquisition of new houses. The PMCMV (Programa Minha Casa Minha Vida or My Life My House Program, introduced in 2011) is financed primarily by the fund called FAR (O Fundo de Arrendamento Residencial or Residential Lease Fund) which is directly supported by the national treasury; it is not financed so much by FGTS. FGTS credits take care of the population over three minimum wages while PMCMV is for those below this wage standard. In other words, PMCMV takes care of the population less than R\$ 1,600 (bracket 1) (in 2011 when the program started, the minimum wage was about R\$ 540). PMCMV also helps the population between R\$ 1,600 and R\$ 5,000 (brackets 2 and 3) use FGTS credits for acquiring houses through the subsidy plan. That is why Table 6 in Section 3 of this paper includes the budget for PMCMV too.

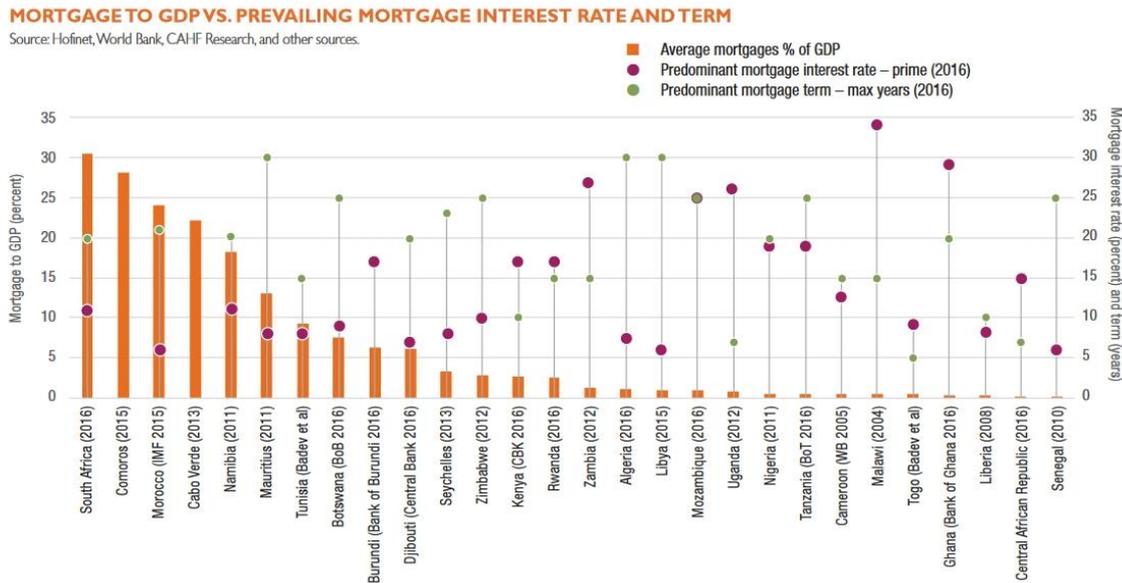
Table 10 Purpose of using the FGTS credits for housing in the year 2015

Purpose	Type of the real estate	Quantity (units)	Percentage of the total	Financed value (in 1,000 Real)	Percentage of the total
Acquisition of a new house	New	200,144	75.2	18,131,811	74.4
Acquisition of a used house	Used	55,843	21.0	5,530,778	22.7
Construction	New	8,610	3.2	667,377	2.7
Amplification, renovation, conclusion or improvement	Used	1	0.0	52	0.0
Urbanized lots	-	0	0.0	0	0.0
Construction material	New	670	0.3	15,007	0.1
	Others(*)	1,010	0.4	22,290	0.1
Total		266,278	100.0	24,367,315	100.0

Source: Translated into English by the author from Table 15 of the official 2015 report of FGTS (Ministério de Trabalho e Emprego 2016, 55). Percentages are added by the author.

As is shown in Figure 10, mortgage to GDP ratio in some African countries is much higher than that of Brazil. South Africa is an example with over 30 percent. Cabo Verde is also high with about 22 percent. Brazil's ten (10) percent now appears remarkably low as compared to some of the African countries.

Figure 10 Mortgage to GDP in Africa



Source: CAHF (2016, 13)

## 5-2 Public housing finance mechanism in Japan: growth and decline

Figure 11 shows the changes in the annual housing mortgage offered by public and private organizations in Japan between 1989 and 2016. Figure 12 taken from Eiji OIZUMI's recent work covers more years than mine by dating back to 1970. The public providers in my Figure 11 are many as is shown in the Note to the Figure 11, while Figure 12 (OIZUMI's "Figure 7-5") takes Japan Housing Finance Corporation (Japan Housing Finance Agency today) as the single provider of public loan. Due to this difference and to the possible difference of original data sources, the lines of the two Figures do not completely match. But as far as the period between 1989 and 2010 is concerned, they roughly show the same trend both for public and private providers of housing mortgage. The year 1995 records the peak amount of annual lending which was 380,488 (100 million) yen (= approx. 38 trillion yen). GDP of Japan of that year was about 441 trillion yen (note 10). Therefore, the proportion of total housing credit both public and private in 1995 as percentage of GDP in Japan was about 14.3%. Outstanding balance of both private and public mortgage loan in Japan in 1995 was about 1,677,668 (100 million) yen (=167.8 trillion yen). The proportion of the outstanding balance against GDP in 1995 is therefore about 38 percent. This roughly matches the data in Figure 7 taken from the IMF Staff Discussion Note. From Figure 7, we can learn that Japan's mortgage size is in the middle position among many countries both developed and developing.

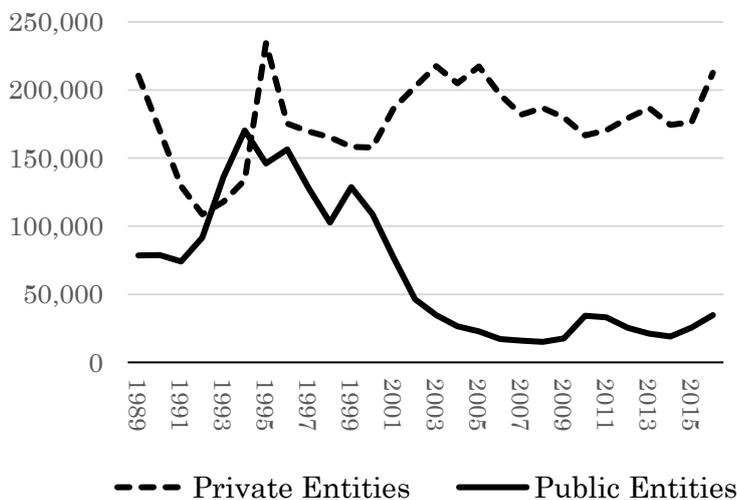
One reason behind this middle position of Japan (a reason why Japan's rank is not higher) is that the role of public finance (central and local) in providing houses is rather eminent compared to other countries. In Japan local governments are conspicuous players as well in public house provision. This is a difference between Japan and Brazil;

the role of local governments in public housing provision in Brazil is more limited.

As is clearly indicated, there occurred a structural change in this period with the public mortgage declining sharply since 1994. This dramatic shrink of public loan is attributable mainly to the following three factors: The first factor is that the advantage of public loan vis-à-vis private loan vanished due to the low or zero interest rate policy since 1998 (up to today, with some short interruptions) of the Central Bank of Japan. The average contract lending rate in July 2017 of commercial banks is 0.620 percent. The second factor is privatization of FILP in 2001 when postal savings was separated from FILP and FILP started to finance itself by means of the issuance of FILP bonds in the financial market. The third factor is rather simple. Housing shortage or housing deficit in a classical sense was basically resolved. ‘In a classical sense’ here refers to concentration of a massive amount of precarious houses in big cities. We do not see that problem in today’s big cities in Japan. Japan is certainly struggling with the fresh challenges that include (1) housing shortage for the low-income, young, unmarried persons whose job is often part-time and instable and (2) the renovation of 30-year-old or 50-year-old collective public condominiums. There ARE new problems but a classical problem such as slums has been resolved through mass housing policy in the high and low growth periods between 1950s and 1990s.

The dramatic shrink of the public mechanism of mortgage credits matches the vanish of the ‘three-pillar’ system of housing policy discussed in Section 4-2.

Figure 11 Comparison of annual housing mortgage between public and private entities in Japan after 1989 to 2016  
Unit: 100 million yen (the top 250,000 line is 25 trillion yen)

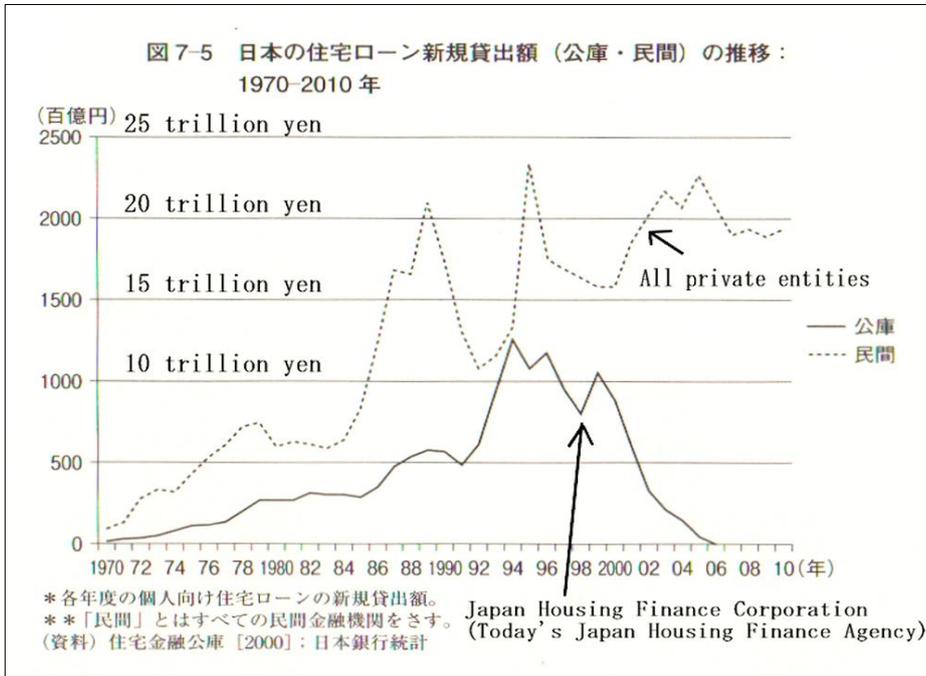


Note: Private entities are domestically licensed banks (which include city banks, regional banks, regional banks II, trust banks, long-term credit banks, and trust accounts), credit unions (Shinkin banks), Shinkin Central Bank, credit cooperatives, labor banks, National Mutual Insurance Federation of Agricultural Cooperatives, life insurance companies, property insurance (non-life insurance) companies, and housing loan companies. Public entities are Japan Housing Finance Agency (Housing Finance Corporation before 2007), local governments, Welfare and Medical Service Agency, Organization for Workers Retirement Allowance Mutual Aid and Okinawa Development Finance Corporation.

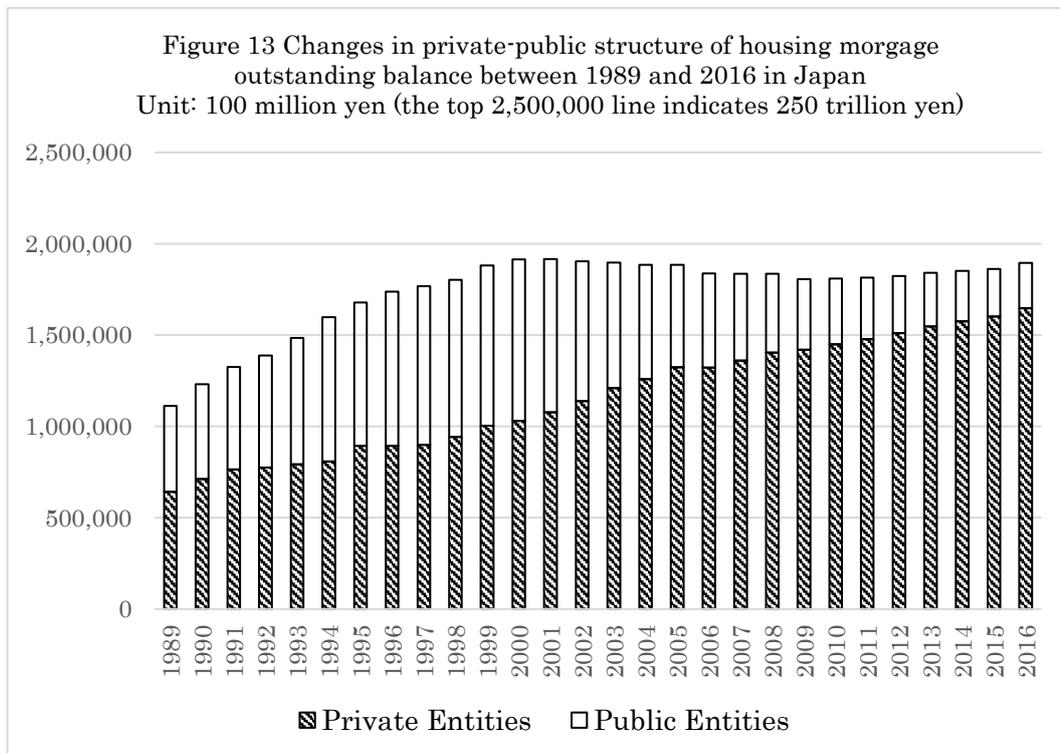
Source: Prepared by the author based on the excel table from the Research and Investigation page of the official website of Japan Housing Finance Agency whose URL is this:

[http://www.jhf.go.jp/about/research/loan\\_zandaka.html](http://www.jhf.go.jp/about/research/loan_zandaka.html)

Figure 12 Comparison of annual housing mortgage by Japan Housing Finance Corporation and by private entities between 1970 and 2010



Source: English explanations are added by the author to Figure 7-5 taken from Page 137 of Eiji OIZUMI's recent book (Oizumi 2013).



Note: Same as in Figure 11.

Source: Same as in Figure 11.

## 6 Why doesn't mortgage loan develop in Brazil?

Mortgage loan is regarded as a good business for lenders (banks) in many countries thanks to the nature of its low-level risk. Lending money to a household who buys a house with that money is seen much safer than the business of lending money to a businessman who plans to set up a new factory to manufacture a new commodity. A factory can go bankrupt but a household is less likely. But in most developing countries, supply of mortgage credit is limited and it has been so in Brazil. There has been a significant effort to promote a big program of housing policy (subsidy to housing loan) called Programa Minha Casa Minha Vida (PMCMV, My Life My House Program) since 2009 – 2011. Program of MCMV is one of many big programs of social housing which have gained sudden and extensive popularity over the last ten years or so around the world (note 11). Brazil also jumped in this international trend of housing policy expansion, but still it may be safe to argue that mortgage credit in Brazil has been very limited to today. Why?

### 6-1 Strength of housing's collateral

Robert M. Buckley (note 12) wrote in his book published in 1996 on the underdeveloped mortgage market in developing countries (Buckley 1996): "The main reason for this is lack of credible contracts of the sort discussed by Oliver Williamson (1985). The cost of postcontract governance rather than the cost of producing contracts explains this restrained supply of mortgage credit." (Buckley 1996, 11). Let me summarize his discussion about characteristics of housing finance. Except for squatter areas, houses are generally durable. This durability creates demands for a long term loan. A commodity of a short life, such as juice which we usually consume in a matter of few minutes, does not demand finance even if it is expensive. At a coffee shop called Grand Cru Café Ginza (Mi-Cafeto) in the Ginza shopping area of Tokyo, a cup of coffee costs about US\$ 150 (note 13). A customer may not resort to finance to taste that coffee; a lender may not offer finance to the borrower for drinking coffee because a cup of coffee has no collateral value. But a thing with a long life can be bought on loan. When the life of the product is 30 years, the maturity of the loan can be as long as 30 years. Housing's durability thus affects demand for long term finance. Long term finance is affected by the housing's collateral strength as the socio-economic environment can change in the long run and as a negative change can negatively affect the borrower's ability to repay the debt. Buckley points out two elements as strength of housing's collateral.

First, housing is a highly redeployable asset. He writes: "Housing is a form of wealth that, in principle, can be transferred with less loss of value than is the case for most other assets. (...) Consequently, the contractual rules governing its long-term financing can be relatively straight-forward from a strictly financial perspective. If the loan is not repaid, the house can be reclaimed with lower relative loss." (*op. cit.*, p.13) One point to note carefully here is that housing's safety from its durability and redeployability can be offset by the government's allocation of protection and rights to borrowers. Even if a family stops repaying the mortgage debt to their lender from their economic predicament, eviction is a politically difficult or impossible choice in many democratic societies today. Avoiding eviction is politically and socially correct. Despite this social nature of housing, redeployability may be true. Second, housing's real denominated return is high. Buckley writes: "Finally, both theory and empirical evidence suggest that housing's value is likely to increase as economies urbanize, regardless of the efficacy of the financial system." (*op. cit.*, p.14). Even if the policy environment is uncertain, housing's collateral strength goes up because housing looks

like a safest form of saving.

Despite such long-term collateral strength supported by redeployability and high-return (tendency of real estate values to keep rising), mortgage credit affordability is low in Brazil and in many developing countries. In that case, making a house cheap can be a theoretical alternative, but it is not a realistic path. Houses with lands remain expensive, often at a level of a multiple of annual income. One factor may be its nature as ‘positional goods’, a well known concept developed by Fred Hirsch in his classical work *Social Limits to Growth*. Supply of ‘positional goods’ such as houses and executive posts in a company is always limited. Supply of houses in developing countries is more limited than in developed countries due to the limited endowment of urban infrastructure such as water, sanitation, street lights and paved roads. Generally speaking, policies do not work efficiently to control the rising housing prices. Figure 14 shows an OECD data of a recent trend of housing price in Brazil with the price in 2010 as 100. Even after the economic crisis of 2014, the housing price today is significantly higher than the price in 2008.

Mortgage affordability can be controlled by policies more easily according to Buckley.



Source: Website of OECD (URL= <https://data.oecd.org/hha/housing.htm#indicator-chart>)

## 6-2 Popularity of housing as collateral

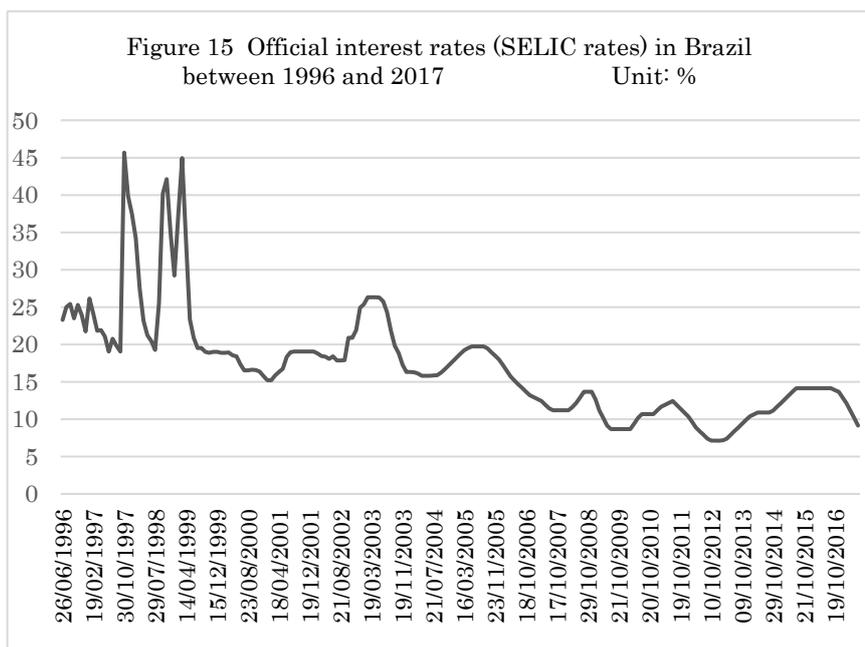
Buckley further argues that residents can use their houses as the safest collateral for financing assets other than housing. This is one of the ways how borrowers are concerned with housing’s collateral efficiency. This may be especially true in developing countries where there are few other ways to collateralize household wealth. For lenders, existence of a safer collateral is welcome to promote the loan business. In the 1990s in the USA, consumption was expanding partly thanks to growing household indebtedness, which was made possible through the mechanism of consumer loan based on housing’s collateral strength. The names of the arrangements were Cash-out Refinance and Home-Equity Loan (second mortgage). When we review these financial tools today after the end of the housing bubble in USA around 2006 and 2007, both pros and cons should be considered. But housing’s collateral efficiency is one of the positive factors that affect mortgage loan affordability in developing countries. Now we turn to some of the negative factors which impede development or deepening of mortgage loan market.

### 6-3 Five factors that impede mortgage affordability

Five factors can negatively affect mortgage affordability. First, inflation. High inflation rates discourage lenders to engage in this business while “low rates of inflation redistribute real mortgage repayments toward the early years of a mortgage loan, making payments out of income in those years more difficult” (Buckley 1996, 15). The latter case could be happening in Japan today under the long and serious deflation over 20 years. If this were the case, there could be a vicious circle at work: deflation makes the burden of mortgage repayment heavier and heavier for households, leading to less final consumption, which discourages plant investment. This whole cycle lets the deflation continue.

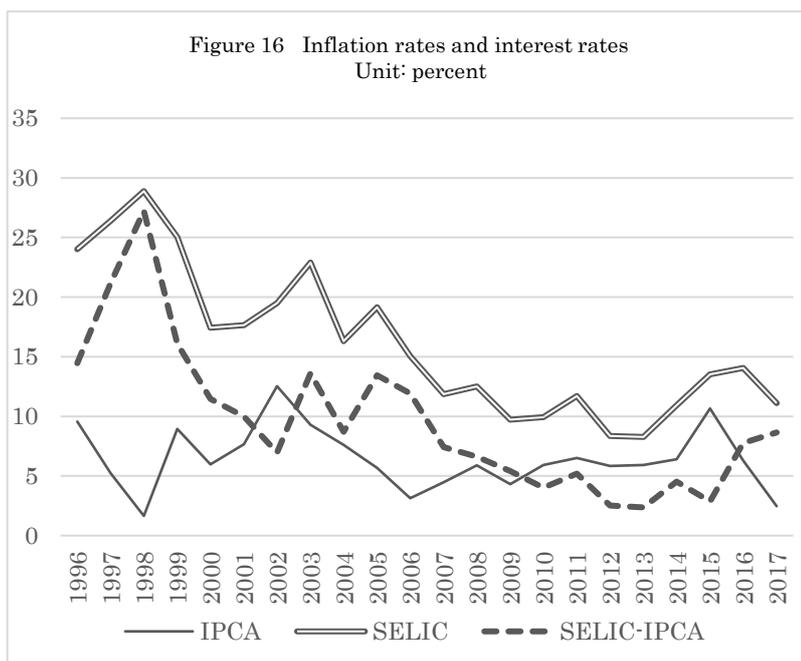
Second, indexation. In a high inflation (or hyperinflation) era, government introduces an indexation policy to mitigate the impacts of rapid price increase. This is what was happening in Brazil in 1970s and 80s, but it did not work effectively. In the early 1980s when BNH (Banco Nacional de Habitação, National Housing Bank) was still operating, the rate of loan indexation was higher than wage indexation in some years, making the debt repayment in real terms heavier on the shoulders of the borrowers. This was one of the factors behind the extinction of BNH in 1986 in my understanding although other factors might have been significant as well.

Third, high interest rates. Let us take a look at the SELIC rate of Brazil over the past twenty years (see Figures 15 and 16 below). Such high rates are certainly a restraint on mortgage loan market. This may be self-evident.



Source: Prepared by the author from the excel table available at the Website of the Central Bank of Brazil whose URL is this:

<https://www.bcb.gov.br/Pec/Copom/Port/taxaSelic.asp#notas>



Sources: Prepared by the author from the excel tables available at the Websites of the Central Bank of Brazil and IBGE. SELIC is from the Central Bank and IPCA is from IBGE.

URLs are as follows:

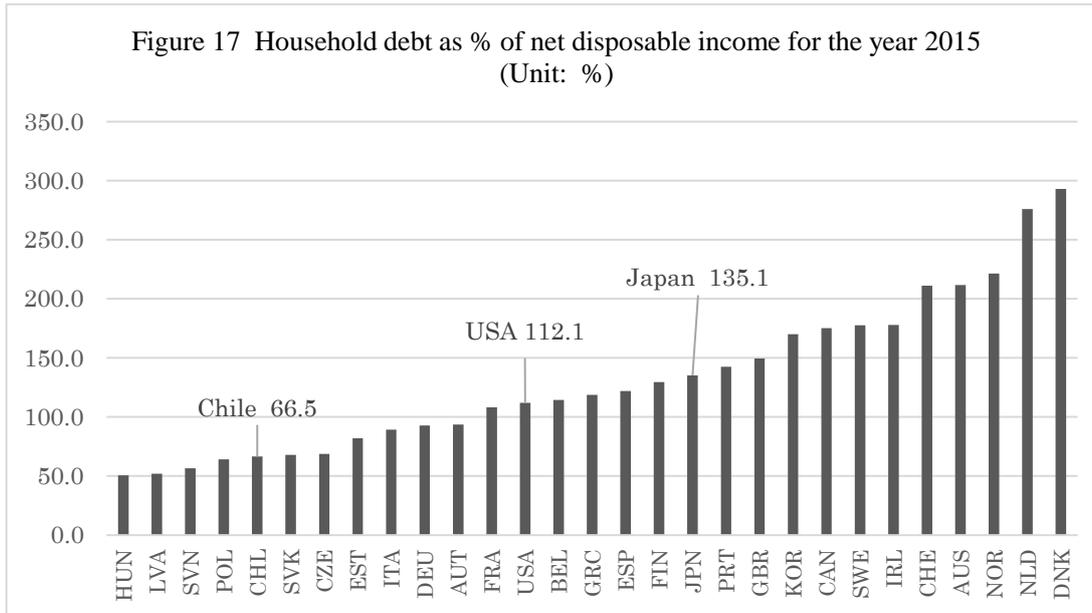
Central Bank of Brazil

<https://www.bcb.gov.br/Pec/Copom/Port/taxaSelic.asp#notas>

IBGE [http://www.ibge.gov.br/english/estatistica/indicadores/precos/inpc\\_ipca/defaultseriesHist.shtm](http://www.ibge.gov.br/english/estatistica/indicadores/precos/inpc_ipca/defaultseriesHist.shtm)

Note: IPCA is Extended National Consumer Price Index. The numbers used for this graph are the accumulated number for the previous 12 months as of December of each year except for 2017. The number for 2017 is the accumulated number of the previous 12 months as of August. The number for SELIC of each year is the simple average of many different rates of the year. The difference between SELIC – IPCA gives rough estimates for real interest rates of the years covered. Fischer’s equation should be employed for better estimates of real rates.

Fourth, poor households which are a large part of the population in many developing countries generally lack in mortgage repayment capability. Thus demand for finance stay low. But Buckley offers a different view based on an India’s case where many households kept gold and precious metals whose total value was very significant. He contends that it is a matter of portfolio management of households. Portfolio is shifting from gold and other metals to housing investment in India according to his explanation in 1996. As to mortgage repayment capability of the Brazilian households and their recent portfolio management, an empirical research is needed. But there is a report by CGAP about doubling of Brazil’s debt-to-income level from 22% to 40% during the period between 2006 and 2011 (note 14). Although it is still lower compared to many other countries including the European developed countries and Chile (66.5% as of 2015) as is shown in Figure 17, attention should be paid to financial health of households in Brazil.



Source: Prepared by the author based on the excel data available at the website of OECD.

URL = <https://data.oecd.org/hha/household-debt.htm#indicator-chart>

Fifth, weak institutional arrangement can hamper development of mortgage loan market. One example is a system of third party guarantee. A well-designed system of third party guarantee can make mortgage loan contracts more credible. How much is the weight of this variable in the overall low level of mortgage loan market in Brazil is another question to study in the future.

## 7 Summarization and conclusions

### 7-1 Summarization

Section 1: Housing market generally tends to show more supply than demand, despite the word “housing deficit.”

Section 2: There might be a mild negative correlation between the amount of broad money and slum population (correlation coefficient: - 0.408 / year = 2001). Credits’ effect on housing provision looks important.

Section 3: Brazil’s credit size is 58.9 percent of GDP (2014) (Table 6). FGTS credits are part of it. 82.7% of FGTS credits go to the sector of popular housing in 2015 (Table 7), so FGTS is much more housing-oriented compared to Japan’s FILP. FILP of Japan has been undergoing a dramatic shrink since around 2000 due to many reasons. One factor is privatization of the system which occurred in the mid-2000s; another factor is reduced domestic demand for mass housing (almost 8 million housing units are now vacant with some of them abandoned).

Section 4: Housing policies of both Japan and Brazil have put priority on home ownership by means of utilization of public finance mechanism (FGTS in Brazil and FILP in Japan), but Japan’s policy framework is more diversified in the sense that fiscal policies (especially at the municipal level) are also extensively mobilized for mass housing. Overall performance of housing provision in Brazil has been limited compared to Japan and USA with annual provision of 630,000 units at the most (before 2006). USA’s approach of tax expenditure (tax credits, income deduction, etc..) is a source of many productive academic debates, while fiscal policy’s role in housing provision seems to be very limited in Brazil.

Section 5: Housing credit of Brazil is around 10 percent of GDP. Which is rather small compared to other developed and developing countries. Despite the federal government's strong push for PMCMV, which is a support system for giving low income residents better access to housing credits, the overall performance has been limited in international perspective. On the other hand, the government's boost for social housing is in the general international trend of dramatic expansion of social housing programs in the recent years. Japan's public housing credits have been shrinking dramatically. Public sector has been retiring significantly from mass housing sector in Japan in the recent decades.

Section 6: Houses' value as collateral for household loan may also be important in Brazil considering the tendency of the housing price rise. But high interest rates and household indebtedness impede development of mortgage affordability in Brazil. Institutional arrangements which affect mortgage affordability should be the author's research theme for the near future.

## 7-2 Conclusion

Housing policy in all the countries in the world may be at a turning point. A change in the approach is being needed in a way peculiar to each country's historical and social context. Every country faces tough questions regarding the housing policy at this turning point.

Japan: Should the recent dramatic shrink of public sector in mass and social housing continue in the next twenty years with so many new challenges looming up? How should construction companies react to the expected fast shrink of domestic housing market?

USA: Housing credit system once failed in 2006-2008. QM rule was introduced to give more control to mortgage loan, but it is being criticized by President D. Trump. On the side of fiscal policy, should there be a greater role of public sector beyond the tax expenditure approach?

Other countries (which were not discussed in the main body of this paper): Some countries such as Pakistan, Uganda and Lebanon are receiving an enormous number of refugees (several millions) in the recent years from humanitarian considerations. This massive inflow of new refugees are creating big needs for shelter and mass housing. How should the governments of these countries react? What can the international community do to help them cope with this unprecedented challenge in the housing sector?

Brazil: As there are so many housing programs including community level participatory actions (many of which are linked to FGTS and PMCMV), obtaining an overall precise picture of housing policy is challenging. But it may be safe to state that overall performance of mass housing has been rather moderate and very short of actual demands and needs. Financial and fiscal commitments to the housing and urbanization sectors may have been small. Should Brazil depend on mortgage loan system more to promote mass housing, expecting a greater repayment capability of households? Or is the current household indebtedness too big for the mortgage affordability to deepen further?

Given the idiosyncratic and complex nature of the housing problem, no simple answer is possible, but my impression about Brazil is that a biased approach would not be realistic. A biased approach here means to expect the fiscal policy only to play a leading role or to expect a financial (credit) system only to play a leading role in housing provision. Perhaps both fiscal and financial (credit) systems should further develop at the same time in a balanced way to realize faster provision of affordable houses to all residents who need them.

Notes:

1 The author has a little reservation as to the use of the word ‘deficit’ to refer to the problem of subnormal housing. He thinks that subnormal housing is a phenomenon OUT OF the market; therefore the market concept such as ‘deficit’ is not a word of the best choice. He does agree that from the viewpoint of protection of natural rights (or basic human rights), the problem should be solved fast by means of combined efforts of market mechanism and proper governmental intervention. Generally speaking, the formal housing market does not have deficit; supply tends to exceed demand in this market. Surplus rather than deficit is constantly needed to promote smooth transaction of houses. The question of how much surplus is best is a difficult question to answer. The question of whether the current eight million vacant (abandoned) houses in Japan are too many or not should be evaluated not only from economics viewpoints but from social points considering the negative psychological impact of an abandoned (often decayed) house in the local community.

2 The IBGE’s census data for 2010 is available here: <http://censo2010.ibge.gov.br/>

3 One factor might be the impact of recent space restructuring in urban centers as part of the strategy to make the national economy more integrated into the globalizing world economy. Urban renovations to invite contemporary economic functions for international finance and advanced R&D activities in the urban center might be resulting in displacement of old residential areas with new office buildings. Increasing real estate values in the CBDs (central business districts) can drive some low-income residents away from urban centers who can newly become slum residents. *A Cidade como Negócio* (The City as Business) edited by Ana Fani Alessandri Carlos, Danilo Volochko and Isabel Pinto Alvarez is an academic attempt from the disciplines of sociology and geography to illustrate this transformational process in the Brazilian cities in the recent two decades. Dr. Joan Clos, Under-Secretary-General of UN-HABITAT, strongly warns in the introduction to *World Cities Report 2016*: “The world has changed remarkably since the Habitat II Conference took place in Istanbul in 1996. Twenty years appears to be a short span of time, but our ideas, practices, modes of production and consumption, demographic structures, as well as education and health conditions have drastically changed. The way cities are shaped, their form and functionality have also been transformed over these years. Many of these changes have been for the better, but others for the worst. The growth of the world’s cities, from the north to the south, and from the east to the west, is ingrained in a culture of short-term economic benefit and often unbridled consumption and production practices that compromise the sustainability of the environment. The causes may vary according to different contexts, but uncontrolled growth, privatization of public goods, lack of regulations and institutions as well as forms of collective indolence are often the key factors behind a model of urbanization that is becoming highly unsustainable.” (UN-HABITAT 2016, iv)

As to Japan’s space restructuring, the change occurring in the central Tokyo is remarkable with more and more high rise buildings (both business skyscrapers and tower condominiums) being constructed every year; about twenty towers (200 to 330 meters high) are being planned towards around 2025. But this tower construction boom is not causing birth of slums. Another feature of regional restructuring in Japan is municipal amalgamation towards more efficient regional space management. About 3,300 local municipalities before the amalgamation campaign (national government’s initiative) is now reduced to about 1,700. One local government takes care of a larger administrative territory than before. This change can also be interpreted as part of the effort towards more efficient local

administration in the era of global competition. Dollery and Yamazaki (2017) is a critical review of this process.

4 The data is taken from the official website of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of the Japanese Government. Excel tables in English are available here:

<http://www.e-stat.go.jp/SG1/estat/ListE.do?lid=000001171643>

5 The current total number of post offices in Japan stands at 24,052 as of the end of August of 2017 according to the information from the official website of Japan Post whose ULR is this:

<http://www.post.japanpost.jp/notification/storeinformation/index02.html>

6 This election was realized with the single issue of “whether or not to privatize post office system”. It was a highly polemic issue then; the nation was divided with many voters unable to judge. But the voters finally decided to somehow favor the initiative of this ‘populist leader’ J. KOIZUMI. With this strong public support, PM KOIZUMI went ahead with the plan of privatizing the postal system.

7 The number of consultations over house renovation frauds which the National Consumer Affairs Center of Japan received from consumers in a year between 2012 and 2016 is in the table below:

Year	2012	2013	2014	2015	2016
Number of cases of consultation	6,496	7,296	6,871	6,767	6,580

Note: The numbers include a few hundreds of cases in which the person who concluded the contract is incapable of making judgement for some reasons.

Source: Excerpted from the table available at the website of the National Consumer Affairs Center of Japan ([http://www.kokusen.go.jp/soudan\\_topics/data/reform.html](http://www.kokusen.go.jp/soudan_topics/data/reform.html))

8 The funding providers such as commercial banks participating in the system of SBPE decreased in the 2000s with a consequence of a greater degree of concentration of this business in the hands of the remaining banks. Around the year 2008, the following 17 public and private banks are in the system according to UNHABITAT’s report (UNHABITAT 2010, 28): CEF (Caixa Econômica Federal), Banco Nossa Caixa S.A., Banco do Estado do Rio Grande do Sul S.A., Banco do Estado do Espírito Santo S.A., Banco do Estado do Sergipe S.A., and Banco do Estado do Pará S.A. (in total, 6 public banks) in addition to Bradesco, Itaú, Santander, HSBC Bank Brasil, POUPEX, Real, Safra, Citibank, Mercantil do Brasil, BicBanco and Lemon Bank (in total, 11 private banks).

9 ABECIP stands for Associação Brasileira das Entidades de Crédito Imobiliário e Poupança (the Brazilian Association of Real Estate Loans and Savings Companies), which is a highly important business association in the housing and real estate sector in Brazil.

10 The figure is from the excel table available at the official website of the Cabinet Office, Government of Japan, whose URL is this: <http://www.esri.cao.go.jp/jp/sna/menu.html>

11 Robert Buckley, A.Lallergis and L.Wainer jointly write: “Over the past decade there has been a sudden, extraordinarily large, and simultaneous expansion of multi-billion dollar housing programs in many emerging and developing economies. This shift occurred after a long period of limited public involvement in social housing production.” (Buckley, Lallergis and Wainer 2015, 1). Some of the big programs other than PMCMV of Brazil are: Argentina Credit Program (PROCREAR) [Argentina], Viviencia de Interés Social (VIS) [Colombia], Integrated

Housing Development Program (IHDP) [Ethiopia], Rajiv Awas Yojana (RAY) [India], Esta es tu Casa [Mexico], Comprehensive Plan for the Development of Sustainable Human Settlements [South Africa] and Baan Mankong (CODI) [Thailand]. (*op.cit.*, Table 1 on Page 3).

12 Other works by R.M.Buckley (currently at Urban Institute, USA) include Buckley et al. (2003), Buckley and Kalarickal (2004), Buckley and Tsenkova (2006), Buckley and Buckley (2010), and Buckley, Kallergis and Wainer (2015) among many other publications.

Buckley et al (2003) is an important work to study a cost effective way of insuring mortgage credit default risks. Buckley and Kalarickal (2004) summarizes the changes of the World Bank's strategy for providing shelter to the urban poor over 30 years and confirms that the Bank's hypothesis is largely valid. The hypothesis is that "a targeted and limited public role is a sine qua non for a well-functioning housing sector."(p. 26). Buckley and Tsenkova (2006) is a basic study on housing policy for the urban poor in transition economies, starting from a fundamental question of what the initial conditions were like in the housing sector when the transition to market economy from socialistic planned economy started in the late 1980s and the 1990s. Buckley and Buckley (2010) studies the negative reviews by geographers of the 2009 publication by the World Bank *Reshaping Economic Geography*, agreeing on some of the criticisms against the Bank's Report and disagreeing on some other points. It is a concise, fruitful reading to reflect over methodologies for regional and urban studies both from academic and practical viewpoints. Buckley, Kallergis and Wainer (2015) captures a recent sudden surge of large scale housing projects around the world and offers a warning that a housing policy should be considered in "a wide range of policy interventions and a prior careful understanding of the large urban policy environment." (p. 10).

13 The website of this coffee shop is here: <https://www.mi-cafeto.com/english/>

14 CGAP stands for the Consultative Group to Assist the Poor. Its headquarter is in Washington D.C., USA. The objective of CGAP is to advance financial inclusion. The URL of the source of this information is here: <http://www.cgap.org/blog/consumer-lending-and-overindebtedness-latin-america>

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