

**Myanmar**  
**Data Collection Survey**  
**on Housing Finance System**  
**Report**

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**Japan International Cooperation Agency**

**Contractor**  
**Mitsubishi UFJ Research and Consulting Co., Ltd.**  
**KISHO KUROKAWA architect & associates**  
**UR Linkage Co., Ltd.**

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# Executive Summary

## **1. PURPOSE OF THE STUDY AND TARGET**

### **• Background and Purpose of the Survey**

Due to rapid economic growth and urbanization in Myanmar, population of urban area is increasing (as of 2014, about 30% of the total population resides in urban areas). Demand for housing also accompanies this trend, and especially in Yangon, Myanmar's largest city, this trend is noticeable and the need for housing supply is imminent.

The Department of Urban and Housing Development (hereinafter DUHD) of the Ministry of Construction of Myanmar (hereinafter MOC) intends to strengthen the legislation and policy aspects, such as the establishment of the Housing Development Law and the Condominium Law, while emphasizes on housing supply. For the 20 years from 2011 to 2030, a plan for housing supply of 1 million households is being planned and executed. Especially DUHD emphasizes housing policy for low and middle income population, and DUHD said that 90% of the 200,000 houses to be built by themselves will be devoted to Low Cost houses for low-income families. Furthermore, emphasis is placed on the housing finance system, supporting the purchase of low and middle income groups, especially for the development of long-term low interest loans.

The Construction and Housing Development Bank (hereinafter CHDB), the executing agency of housing finance, was founded in 2013, and after the pilot project in 2015, CHDB carries out the housing loan business for individuals from 2016. Some of private banks also offer loan service for purchaser of housings, but the target of such loan as well as the volume of the services are very limited.

Based on such recognition that housing finance system is very important for solving the housing related issues which Myanmar faces today, various support have been given by Japanese institutions such as the Ministry of Land, Infrastructure Transport and Tourism, Government of Japan, Japan Housing Finance Agency, JICA, etc.. However, in order to expand these services and make it possible for more citizen in Myanmar to access to such housing finance, , it is indispensable to analyze and solve issues in wide range of fields, including financing methods, arrangement of legal systems to support the loan system, and development of financial infrastructure.

On the premise of the background above, the following is addressed in this Study for fundamental improvement and expansion of housing finance system in Myanmar.

- ① Confirm the current status of the current housing finance system and its premised housing policy and relevant legal system.
- ② Gather and organize information on the current situation and intent of housing operators, homebuyers, CHDB and other stakeholders.
- ③ Provide recommendations of specific projects for concerned institution of the Myanmar government and CHDB, with consideration of possible introduction of ODA loan from the Japanese Government for expansion of the housing finance system.

### **• Target Area and Housing of the Study**

The Study assumes Yangon metropolitan areas and Mandalay as the major target cities where the rapid urbanization and the associated housing problems are emerging.

Regarding the target housing for the study, definition of the Low Cost Housing and Affordable housing for

this study was agreed as below (shown in red frame in the table below), following discussion with DUHD.

**Table 1 Target Housing for Urban Development and the Study**

Housing Category	Low			Middle	High
	Needy	Low Cost	Affordable		
Monthly Regular Income (Household)	MMK 0.1 Million	MMK 0.3 - 0.5 Million	MMK 0.5 - 1.0 Million	MMK 1 – 1.5 Million	MMK 1.5 Mil. or more
Average Size Price (MMK Mil. per housing unit)	MMK 6 Million	MMK 10 - 27 Million	MMK 27 - 50 Million	MMK60 Million	
Average Size	150 Sq.ft.	300 - 800 Sq.ft.	800-1,200 Sq.ft.	600 Sq.ft.	

## **2. LEGAL AND INSTITUTIONAL FRAMEWORK FOR HOUSING SUPPLY IN MYANMAR**

### • **Legal Framework for Housing Supply**

In Myanmar, although there have been some preparations for laws and regulations for the building codes and construction permit systems, they have not been effected yet. In Myanmar, establishment of legal framework has started since 2014, which includes the drafting of Urban & Regional Development Planning Bill and Myanmar National Building Code and National Housing Development Bill. Even though the relevant laws have not been formally legislated yet, YCDC is conducting the development permit systems in operation.

### • **Implementation Arrangement of Housing Supply**

In the Union of Myanmar (Federation of Burma), after independence in 1947, housing construction continued in waves that corresponds to the shift of political system. According to the results of the census conducted in 2014, the housing stock in Myanmar is 11 million units, 1,580,000 of which are in Yangon, and 1,300,000 of which in Mandalay.

### • **Main Players of Housing Units**

#### (1) Union Government

DUHD (Department of Urban and Housing Department, formerly DHSHD) located in the Ministry of Construction (MOC) is the main housing supply agency, making housing supply plans throughout the country and conducting construction in various places. Since its establishment in 1951, DUHD has a track record of building a total of 50,000 houses by 2015, about 80% of which are concentrated in the Yangon area. In parallel, City Development Committees (namely in Yangon, Mandalay and Nay Pyi Taw) have also supplied some housing units, although the numbers are fewer than that by DUHD.

The NLD administration has laid out a policy to greatly accelerate housing construction, and DUHD is also building a large-scale residential complex in the outskirts of Yangon. However, since it cannot deal with the influx urban population alone, the Government encourages the private sector, including foreign investors, to participate in housing supply. Investment in affordable housing is also clearly stated as a priority in the

injection of foreign capital by MIC (Myanmar Investment Committee) launched in June 2017, and it is hoped that support measures by the current regime will be launched.

At present, the housing units built by foreign investors are those in upper part of the market, and are virtually limited to the affluent population and/or foreign nationals stationed in Myanmar. The Condominium Law was enacted in 2016, but the relevant regulations have not been effected, and the law may not be applied to housing units on public lands. Thus it is not clear yet whether the law would boost the supply of low cost or affordable housing units in Myanmar or not.

## (2) Region Governments and CDCs

Some of the major local governments such as Yangon Region Government have supplied rental housings and housings for public servants using the fund of the Union Government. Also, an organization of entrepreneurs and developers called MCEA is considering to launch a scheme to supply low-cost and affordable housing units in collaboration with YRG and CHDB. This kind of initiative may have a larger share of supply in future. YCDC functions as a regulator in DUHD's housing supply to provide construction permits.

## (3) Private Sector

Private sector has provided a number of housing units in Myanmar, particularly in Yangon Region, but most of them are high/middle cost housings, and their role in low cost and affordable housings is not significant.

# **3. PRESENT CONDITION OF HOUSING SUPPLY BY THE PUBLIC SECTOR**

## • **Housing Supply Plan and Present Condition**

### (1) Projection of Urban Population in Myanmar

A national census was carried out in August 2014, and the total population of Myanmar was estimated as 51.41 million. In the same year, 2014, The United Nation's prospects 2014 showed that the urban population in Myanmar was estimated at 18.02 million, and in 2030 the urban population was projected to reach 27.13 million. Accordingly, the urban population will increase 9.10 million by 2030, which corresponds to 2 million households based on a household size of 4.39 as prescribed in the Census. Thus the number of housing units in demand by 2030 will be minimum 2 million, in addition to any existing shortage as well as old and decrepit housing stocks that may have to be replaced.

The above number of housing units in need due to increasing population will be the mostly in Yangon, estimated at 590,000 by 2030, followed by Mandalay and Nay Pyi Taw, with numbers proportionate to their urban population size. Therefore, it is important to provide housing units in Yangon at first and extend supply to other major to middle sized cities.

### (2) Housing Plan of Myanmar Government

The Government of the Union of Myanmar publicized a housing plan focusing on supplying one million units by 2030 nationwide. This corresponds to half of the housing supply needs mentioned above. In response to the one million housing plan, DUHD formulated a 5-year housing supply plan. DUHD plans to supply 20% of the total, of which 90% is low-cost housing and 10% is affordable housing. According to this plan, DUHD will supply 7,200 units per year, of which 90%, or 6,480 unit will be low-cost, and 10%, or 720 units affordable.

As depicted in the figure below which shows the supply of housing units from 1990s through to 2010s,

DUHD supplied more than 1,000 units per year from 1995 to 2007. In particular, between 1997 and 2001, it supplied more than 5,000 units per year. Looking at numbers by types, low-cost units were the majority up to 1997, but from 1998 middle cost units took over the majority and became the mainstream of supply. Since 2008, the annual supply declined and the number fell below 1,000 units per year.

Since 2012 the democratization proceeded at a high pace, and in November 2014, the Government established a revolving fund to cater to the construction of low-cost housing units. This fund was expected to bridge the 2 to 3 year period between the commencements of housing unit construction to the completion of the sales, thus the fund would revolve (turn in, turn out) in a short period of time. The Government released MMK 100 Billion to the Revolving Fund. Accordingly, the number of housing units supplied increased to 9,000 per year.

DUHD indicated that there are three sources for housing supply; 1) government budget, 2) the Revolving Fund and 3) loan from CHDB. Of these, 1) government budget is about MMK 60 Billion (though it decreased in half in FY2016/17), 2) the Revolving Fund has MMK 100 Billion (November 2014) and 3) loan from CHDB amounting to MMK 82 Billion.

There are 11,588 low-cost housing units and 3,594 affordable housing units now being constructed by DUHD in Yangon, as shown in Table 1 and 2. All the low-cost and affordable housing units mentioned above, according to DUHD, have obtained building permits from YCDC, except for Yadana Hninnsi Project. The estimated completion time will be 2018 to 2019.

**Table 2 Low Cost Housing Units under 2-year Program**

(As of Feb. 2018)

Township	Housing Project	Project Area (acre)	Unit size (square feet)	Sold/Transferred Units	Total Units	Status	YCDC Permission	Completion Date
Dagon Seikkan	Yuzana Low Cost Phase 1	15.8	468 - 522	284	864	Finished	Yes	Finished
Dagon Seikkan	Yuzana Low Cost Phase 2	27	468 - 522	487	1,152	Nearly finished	Yes	Nearly finished
Dagon Seikkan	Kanaung Housing	10	468 - 522	154	852	Finished	Yes	Finished
Dagon Seikkan	Yoma Low Cost	30.2	324 - 468	0	1,920	60% finished	Yes	Dec 2017
Dagon Seikkan	Yuzana Low Cost Ph. 3	26	436 - 522	0	1,456	Starting	Yes	Dec. 2019
Hlaing Tharyar	Kyan Sit Min Low Cost Ph. 1	50	324 - 522	0	1,904	77% finished	Yes	Dec. 2018
Than Lyin	Thilawar	30	384 - 400	0	1,480	30% finished	Yes	Dec. 2018 & Dec. 2019
Dagon (south)	Aung Myin Mo Low Cost Ph.1	14.3	484 - 522	0	960	Nearly Finished	Yes	Nearly Finished
Hlaing Thar Yar	Shwelinpan Ph. 2	9.5	484 - 522	420	496	Finished	Yes	Finished
Hlaing Thar Yar	Shwelinpan Ph. 3	7.4	468	150	504	Finished	Yes	Finished
	Total			1,495	11,588			

Source: Original data from DUHD amended by JST

**Table 3 Affordable Housing Units under 2-year Program**

(As of Feb. 2018)

Township	Housing Project	Project Area (acre)	Unit size (square feet)	Sold/ Transferred Units	Total Units	Status	YCDC Permission	Completion Date
Than Lying	Thilawar	30	650	0	240	30% finished	Yes	Dec. 2018 & Dec. 2019
Dagon (South)	Aung Myint Mo	14.3	960 - 1100	0	96	Nearly finished	Yes	Nearly finished
Hlaing Tharyar	Shwe Lin Ban IZ Commercial Area	1	800	0	64	54% finished	Yes	Dec. 2018
Shwe Pyi Thar	Shwe Pyi Thar IZ Commercial Area (3)	5	650 - 1500	0	112	Nearly finished	Yes	Nearly finished
Hlaing Tharyar	Kyan Sit Min (1)	52	650	0	588	77% finished	Yes	Dec. 2018
Hlaing Tharyar	Kyan Sit Min (2)	27	800 - 1500	0	664	22% finished	Yes	Dec. 2018
Dagon (South)	Aung Myint Mo	14.3	960 - 1100	0	96	Nearly finish	Yes	Nearly finish
Tar Kay Ta	Water Front Villa (2)	0.387	927	0	18	Finished	Yes	Finished
Dagon (South)	Inwa Housing	1	1175	0	32	60% finished	Yes	Dec. 2018
Dagon Seikkan	Yadana Hnnnsi Residence	About 21	480/600/1080/1200	512	1,780	Finished	No	Finished
	Total			512	3,594			

Source: Original data from DUHD amended by JST

Note \*: This entry is to be considered further.

Thorough DUHD's original assessment is "Yes", JST gathered information contrary to this.

#### • Status of Housing design/Building Permit

Standard designs are used for DUHD low cost housings. While basic designs were made within DUHD, external design offices are commissioned to produce detailed drawings, including drawings necessary for building permit such as architectural drawings, structural drawings, and structural calculations. The commissioned design office knows thoroughly about the submission requirements for building permit application, and their internal senior engineer accredited by MEC conduct checking of the deliverables before submission.

Designs are basically carried out in accordance to MNBC2012, UBC1997, or ACI381 design standards, as well as YCDC requirements or guidelines.

Design submissions include not only drawings but also soft data of structural calculations using structural analysis softwares compatible to UBC1997 or ASIC 7 such as ETABS, STAAT PRO, and TRAKLAR.

**Table 4 Relationship between Building Height and Application Authority**

Building stories	Approval Authority
4 – 8.5	YCDC
9 – 12.5	HIC
Over 13 stories	CQHP

Housings supplied by DHUD are generally 4 – 6 stories high, thus building permit procedures are carried out by neither HIC nor CQHP but by YCDC.

After the handover of power, YCDC building permit procedures are carried out for all low cost housings;

approvals from YCDC are obtained, and items such as architectural drawings, structural calculations (including ETABS data), soil investigation results, and access to car park are reviewed within YCDC. In addition to building permit procedures, applications need to be made to Myanmar Fire Services Department (MFSD), as well as for the use of electricity, water and sewerage, and road access. YCDC will release “Provisional Permit” when applications are accepted by all the relevant authorities. Currently within Yangon the structural calculations for buildings under 8.5 stories require considerations of four types of loadings: live load, dead load, façade load, and finishing load, while earthquake resistant structural design is not obliged.

For cities outside Yangon such as Mandalay, the design drawings by DUHD do not undertake review or approval by engineers from the local authorities, and DUHD only carries out self-inspection for construction works on site.

#### • **State of Housing Construction Work and Quality Control**

The construction supervision and construction management for the Low Cost Housing and Affordable Housing being ordered by DUHD (the Department of Urban and Housing Development) are carried out as follows:

- ① Along with the site works, DUHD commissions the contractor with fee equivalent to 3% of the construction costs for construction management.
- ② DUHD separately commissions a third-party construction supervision firm to supervise the construction.
- ③ Construction supervision is carried out by a Registered Senior Engineer certified by MEC (Myanmar Engineering Council) of the supervision firm.
- ④ Contractor assigns a construction manager posted full-time on site and conduct self-managed supervision.
- ⑤ The supervision firm conducts inspections based on the MOC inspection manual and reports to DUHD on a regular basis, at least once every two weeks.
- ⑥ DUHD pays the contractor based on reports made by the supervision firm.

Based on the “MOC Inspection Manual”, strict inspections are carried out by the contractor, a third-party construction supervision firm, for all Low Cost Housing and Affordable Housing constructed by DUHD.

The manual is structured as follows: 1) roles and qualifications of inspectors, 2) points for attention in various types of construction (concrete, steel-reinforcement, formwork, temporary falsework, foundations, brickwork, plastering, supply and processing (water supply, sewage, electricity, etc.)), 3) safety measures, and 4) detailed requirement criteria for building materials which provide a checklist template on the items to be carried out by inspectors when performing on-site inspections and checks.

The survey group conducted on-site surveys in relation to the state of quality control. As a result, it was confirmed at the visual level that works are generally being carried out appropriately for the major construction types such as steel-reinforcement, concrete, brickwork, etc. On the other hand, however, the state of the level of construction work differs depending on the contractor to which the work is being contracted, and with regard to properties being constructed by some of the contractors—amongst other issues—it was found that the finish of the concrete was quite poor, the precision of the formworks was low, and the work was not well finished overall.



There were also found to be many aspects such as worksite organization and safety management that require improvement. These areas may be considered as issues for the future.

#### **4. Current Situation and Issues of Housing Finance and Related Legislation System Overview of the Finance Market in Myanmar**

After the new administration began in 2011, banking transactions have become active and deposit levels are on the rise. Increase in the number of bank branches and ATM spreads. With regard to financial legislation, the new Financial Institutions Act was established in 2016. The Act provides new frameworks for entry of foreign capital, types and contents of banks, e-banking and payment approval system, and bank bankruptcy resolution. Regarding credit decisions, preparations for the establishment of credit information agencies are proceeding and the Central Bank of Myanmar (CBM) also enforced rules and regulations that define the framework for credit investigation.

In the financing operations by private banks, staff loans, commercial loans, hire purchase, SME loans, housing loans, etc. are used as types of loans. Interest rates are determined by the rules of CBM. The current lending maximum ceiling rate is 13% and the deposit interest minimum is 8%.

Mortgage services have also been started by several private banks. Loan targets are bank employees, middle and high-income groups, and they finance to purchase properties developed by private developers. Loan agreement between the bank and the borrower is mainstream, and in several cases the borrower deposits the ownership book of the property to the bank as a collateral. The default rate is less than 1% or it has not occurred. At the time of default, court proceedings are necessary to execute the collateral. YCDC also carries out Low Cost housing projects using private banks' housing loan. It was pointed out as issues that it takes long time to do trial proceedings to execute collateral, and collateral system is vulnerable due to lack of registration system for housing units and collateral.

##### **• Current Situation and Issues of Housing Finance by CHDB**

###### **(1) Housing Loan Scheme**

Through the examination by CHDB, the applicant pays 30% of the house price as a down payment to CHDB, and a tri party agreement is concluded between DUHD, CHDB and a purchaser. Then 100% of home purchase price is paid from CHDB to DUHD. DUHD issues and delivers a temporary residence certificate to the purchaser, and the purchaser becomes able to move in the property. In addition, the ownership book of the target housing is deposited as a collateral from DUHD to CHDB (the name remains as DUHD). Ownership of the target housing is not transferred to the purchaser at the time of the tri-party agreement. When the purchaser fully repays the loan amount, it is transferred to the purchaser.

Until the purchaser pays out the loan, the target housing cannot be sold, gifted, nor rented to a third party. In addition, resale is forbidden for five years from the start of loan even if it pays off early. When the loan is paid off, the ownership book is delivered to the purchaser, and the ownership of the property is transferred to the purchaser. However, since unit ownership is not admitted in Myanmar, what has been referred to as “ownership” here is different from general meaning of ownership, and it is explained as “the right to live and transfer” as the right which is granted by the authority to citizens to live and transfer. The government keeps ownership of the land, though the purchaser does not have to pay the rent.

At the time of default, in accordance with the Government Premises Eviction Act of 1955, DUHD forcibly

evicts the purchaser and resells the property to a third party. With the price at the time of resale, DUHD repays the remaining loan amount to CHDB. As a problem, if the property price at the time of resale exceeds the initial selling price, DUHD says it will return the remaining surplus to the purchaser. However, in the case that the property price is rising, a moral hazard can arise to intentionally default the loan and obtain the excess surplus.

Furthermore, if the resale price falls below the initial price, DUHD will not be able to fully return the down payment and the repaid loan amount to the purchaser, resulting in a loss to the purchaser. Because there is no agreement on the tri-party agreement regarding this loss burden, there is a risk that the purchaser requests DUHD to return the balance. In order to avoid these risks, revision and review of the tri-party agreement are necessary. Although it can be said that the execution of collateral is more certain than loan scheme by private banks in the point that DUHD is able to enforce collateral without undergoing court procedures at the time of default. Hence it can be said that the number of CHDB loans is growing. However, in the case if DUHD neglects to resell the unit at the time of default, it will be DUHD's breach of the agreement, and judicial proceeding is necessary. Therefore, when considering DUHD as a servicer for collecting receivables of CHDB, it is necessary to recognize the fact that CHDB is also taking this servicer's risk.

- **Legal Issues Related to the Housing Market and Housing Finance**

As a root cause of these problems, there is a problem that unit ownership of the real estate building is not allowed in the Myanmar law. In order to root housing loan structure in the Myanmar society in the future, to include not only CHDB but also private banks as housing loan providers, and to expand the loan target to not only properties built by DUHD but also properties built by private developers, establishment of unit ownership is necessary.

Furthermore, in Myanmar the registration system for collateral is underdeveloped. The subject property of collateral itself is not properly registered. Or, because unit ownership is not admitted, even if someone sets up collateral on an apartment unit, the collateral pledge agreement cannot be registered at the Office of Registrar of Deeds and Assurances, Settlement and Land Records Department, the Ministry of Agriculture, Livestock and Irrigation (hereinafter MOALI). For that reason, a method of collateral, "mortgage by keeping title deed as collateral," is widely used for housing loans. However, in order to execute the collateral set by the method, it is necessary to judge the effectiveness of the right sale and collateral and obtain court decree, resulting in long term and costs. Development of legal system of registration and collateral execution system is necessary for smooth, reliable, and short term collateral execution.

## **5. Demand survey for housing finance**

- **Outline of the Survey**

In order to ascertain the demand for the housing and housing finance of the citizen who will be the final borrower of housing finance, a survey was conducted on approx. 2,000 households regarding the situation of existing houses, future home purchase needs, and the possibility of housing finance use. As the candidate cities to be surveyed, three cities of Yangon, Mandalay, and Bago in the top 3 cities of the census urban area were picked. The surveyed subjects were targeted to those who "can buy houses (including possibilities in

the future)" and "is difficult to purchase houses by themselves so funds procurement is necessary ". Therefore, the low middle income group of the supposed purchasing layer (household income MMK0.3 - 0.5 mil.) for target buyers of Low Cost housing supplied by DUHD and the assumed purchasing layer of affordable housing (household income MMK0.5 - 1.0 mil.) was set as the main target of the survey.

Survey items were prepared in consultation with MOC, Yangon City Development Committee, JICA, Japan Housing Finance Agency, and local consultants. Main questions were about (1) household member information, (2) household income situation (past 3 years), (3) expenditure status, (4) existing debt situation, (5) current housing environment, (6) existence of account, (7) hope for future home purchase, and so on.

#### • **Survey Results**

- For household statuses, small family were less than 10%, and the average household size was 4.39 people. The educational level of the head of household was 27% of university graduates and 49% were self-employed. (In Yangon)

- The subjects of this survey was generally households with a monthly salary of 0.3 mil. or more, and monthly household incomes was gradually rising in the three years from 2015 to 2017.

- Household expenditure was mostly less than MMK0.3 mil./month. It turned out that the proportion of household expenditure accounts for a large proportion of electricity bills. On the other hand, households with relatively low expenditure on water bills and without payment still exist to a certain extent.

- Every city has a high proportion of residing in the current residence for more than 10 years, about half of those who are currently residing are about half. (Since they have been changed since the current household was structured)

- Many of the reasons for moving to the current residential area was "high convenience", "convenient for work" and "have new households".

- Households with bank account were 30.1%. About 40% in Yangon, but in other cities it was about 10%. There were various bank accounts, and the principal banks in Yangon were KBZ, MEB, AYA, and CB.

- There are few households with debt, but Yangon tends to be even less than other cities, most of which is less than one year's repayment period. The borrowing amount varies, but borrowing within MMK0.5 mil. was about 80% in Yangon and Mandalay.

- Mortgage awareness was low overall (23.8%). Even relatively high Yangon was about 30%.

- For ownership of land, self-ownership and rent were almost the same in Yangon, but most of Mandalay and Bago were self-owned. Regarding the purchase cost of land, nearly half of there were no answers, but most of the answers were generally within MMK10mil. . And leasehold fees accounted for 80% of the monthly amount of MMK25,000 or less. Land and housing area vary, but more than 60% live in 800 square feet housing in Yangon.

- While the satisfaction level with the residential housing is relatively high, the intention to acquire the housing is getting high. The time to obtain acquisition is generally within 5 years, a newly constructed detached house, which they would like to emphasize mainly, the location, convenience, the size and number of bedrooms of 2 to 3. The location is ideal within 30 minutes to the workplace (Yangon is a bus for commuters, other cities are motorcycles).

- As for the maximum payment amount, about 20% was to MMK10 mil./month, and 40% to 50% until MMK25 mil./month, and most households have MMK50mil. for the upper limit. About 90% wish to use the

mortgage loan, and the monthly payment amount is MMK0.1 mil. by a majority.

- **Target household for housing purchase**

Assuming purchasing a Low Cost housing of MMK10 mil., with such condition that 30% down payment and loan with the fee of 1% plus the annual rate of 8.5% fixed for 15 years, the annual and the monthly repayment amount is MMK0.85 mil and MMK70,000 respectively, and the monthly income required will be more than MMK0.3 mil.. From the demand survey, "Household who wish to acquire housing" and "Household monthly income MMK0.3 mil. or more" was extracted.

Regarding employment situation of head of household, there were various types of occupation, but more than half was self-employed. Household heads with more than 6 years of service were more than half, and after graduation, only 2% of respondents had non-working periods, and most household heads were continuously working. The current residences are detached housings, 90% for Bago and 98% for Mandalay. In Yangon, detached housings are 52%, residential households such as apartments were 42%. Current residence owns 73% in Yangon, 80% in Bago and Mandalay. The percentage of those who have bank accounts is about 40%, and the households who responded to the fund procurement of households who own the current residence were mostly self funded. Households with monthly rents less than MMK0.1 mil. were 67% for Bago, 45% for Mandalay and 36% for Yangon when the current residence is rented.

90% of households wish to purchase newly built housings within 5 years, and in Yangon, about 30% wants apartment etc. The point that emphasizes in purchasing housings is residential area, location, electricity, gas and water service. Households with an acquisition limit of MMK25 mil. are 88% for Bago, 75% for Mandalay and 62% for Yangon. About 90% of households who wanted to buy housings wanted to use a mortgage loan.

- **Estimation of eligible household for housing finance in Yangon**

For households purchasing low cost housing of MMK10 mil., utilizing the abovementioned housing finance, household income of MMK0.3 mil. /month or more will be required.. According to the survey by "Project for Strategic Urban Development Plan of the Greater Yangon, JICA (2013)", 22.2% of household doesn't own a housing, and based on the ratio assumed in this survey, it is estimated that 41,064 households will be eligible in Yangon by the following terms.

- Household monthly income of MMK0.3 mil. or more.
- Paying MMK70,000 or more as a housing rent per month.
- Those who plan to purchase newly built housings within 5 years, housing loan requested when purchase.
- Employment condition of household head is Monthly, Yearly, Lifetime employment or have their own business.

## **6. Consideration of Project Scheme for Housing Finance System**

- **Discussion for the Project Scheme**

One of the major schemes of Japanese ODA is Two Step Loan (TSL). In Myanmar, a TSL project to provide financial support for SME has been already commenced. Assuming that application of TSL would be effective for expansion of housing finance system, scheme for such project was discussed as follows.

On the discussion, the following were set as priorities: 1) Establishment and introduction of housing finance system at the earliest possible time mainly for buyers of Low Cost Housing; and 2) in order to achieve 1) above, utilising the existing DUHD-CHDB scheme to the most extent possible, where CHDB

provides loan for buyers of such housing that are built by DUHD. Considering the fact, however, that suppliers of low cost housing are not limited to DUHD and that in the existing scheme for TSL for SME private banks are also participating in the system as PFIs, such possibility that private banks other than CHDB may join the system are also considered in the discussion.

On the other hand, in order for private banks to participate in the system, at least the following need to be discussed with amendment of law, if necessary.

- ① Division of roles among DUHD and PFIs (including CHDB): the existing tri-party agreement shall be adapted, or shift to a two-party agreement shall be a precondition.
- ② Which institution shall be responsible for screening of end borrowers: for DUHD housing, shall it be DUHD as seller or PFI as a lender
- ③ Which institution shall be responsible for quality control of the target housings: suppliers of such housing or third parties independent from the suppliers? It would be very important to establish such third party institution if housings built by private developers are targeted for the housing finance.
- ④ If collateral legally effective could be set for a case of default by end borrower?

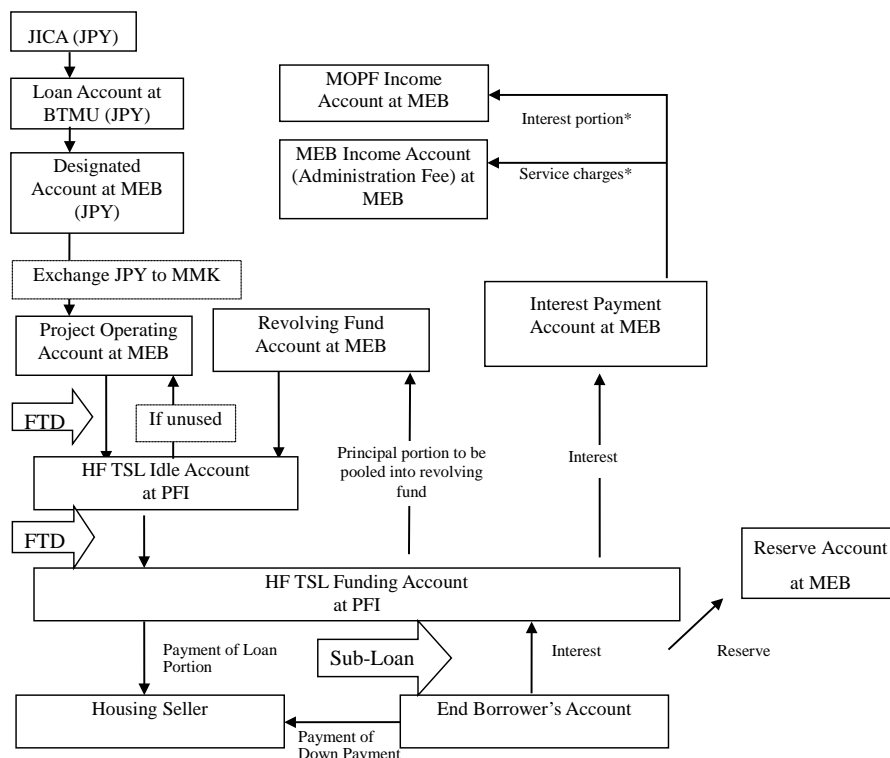
However it may take a long time to sort out all of these conditions. Therefore, it was set as the first priority to commence the loan provision as early as possible, then it was decided to adopt the same structure used for the existing TSL and to add housing suppliers other than DUHD and private banks as PFI to the system only after necessary conditions were met.

#### • **Discussion for Fund Flow and Interest Rate**

Major discussion points in the consideration of the project scheme were how to transfer necessary fund from MEB to PFI and how to set interest rate for each institutions involved.

##### (1) Consideration of Fund Flow

For the existing TSL for SME, FTD (Fund Transfer by Deposit) was adopted where fund requested by PFIs is transferred as “deposit” from MEB to the PFI. This is to secure prompt transfer of fund upon request by PFI while lending may take longer time. However, such concern was also raised that PFI will have to reimburse fund immediately when MEB requests if the fund is transferred as deposit. After comparing pros- and cons- between FTD and lending, it was decided to adopt FTD same as TSL for SME.



## (2) Discussion about Interest Rate

One of the main purposes of introducing housing finance system supported by ODA Loan is to enable financial institutions to procure source finding for lower interest, then offers mortgage loan to the end-borrower for much lower interest. Therefore, such an opinion was also raised that by adding minimum margin for PFIs on the lower interest rate of source funding by ODA the interest for the end user should be lower than the 8%, which is the lowest interest rate for deposit today.

However this opinion was not adopted. It was because if the interest rate was initially made lower than 8%, it would be raised after the provision of ODA loan was over, then it may bring adverse effect for the whole of housing finance system in Myanmar. Therefore, it was agreed that the interest rate for the end borrower should be slightly higher than the minimum interest rate for deposit.

In addition, it was also agreed that while CHDB provides loan under the current tri-party agreement among CHDB, DUHD and the purchasers of DUHD housing, the interest required for CHDB would be carefully examined, then residual, if any, would be kept in a designated Reserve Account to be opened in MEB as extra funding for the expansion of the system in the future.

- **Disbursement Plan**

The purpose of the development of the housing finance system utilising two step loan is not only increasing people who could access to such housing finance, but also improving quality of housing. While the former should be commenced as early as possible, the latter requires certain time to be achieved. In order to meet this contradicting requirement, it was agreed that actual disbursement would be divided into three batches as shown in Table 5 below.

**Table 5 Batch and Target Housing**

Batch	Description of Target Housing	PFI	FY
1st Batch	DUHD housing already constructed/under construction based on the current design with certain quality	CHDB	mid 2018 – 2019
<b>2nd Batch</b>	DUHD housing to be built based on a NEW Design with new inspection rules.	CHDB Private Banks	2020 -
3rd Batch	Housing constructed by Regional Governments such as YCDC	CHDB Private Banks	(2020-)

## **7. Legislation and standards for environmental and social consideration**

Environmental Conservation Law, 2012 was issued on March 30, 2012 as the law related to environmental and social considerations. Following the law, Environmental Conservation Rules, 2014 which stipulates the implementation of environmental impact assessment was issued in June 5, 2013, and Environmental Impact Assessment Procedure, 2016 (EIAP) which indicates the detail implementation procedure was approved in Dec, 2015. In order to complement EIAP, the guidelines and procedure are under preparation with support from JICA.

Environmental Conservation Department (ECD) was formed to carry out the functions for implementation of policy related to environmental management, conservation, and enhancement of environment. Environmental Resource Conservation & EIA assessment Division of ECD is the one to carry out the EIA review process. Because ECD is still new organization, its resource and experience are not considered enough. Therefore, JICA is implementing the capacity building project for ECD to strengthen the skills to carry out EIA.

### **• Environmental and Social Consideration for the Project**

JICA TSL scheme currently under consideration will provide housing loan to buyers of houses through CHDB and it was decided that the housing construction by DUHD and private developers would not be sub-projects. Therefore, there is no significant environment and social impact expected by the Project.

### **• Institutional capacity of environmental and social consideration of executing agency**

There is no significant environment and social impact expected by the Project. On the other hand, because CHDB's housing loan is provided to buyers of houses supplied by DUHD, it is expected to establish the measures and capacity of the executing agency and relevant organizations to mitigate the risk regarding environment and social considerations by the DUHD's housing construction although the construction is not in the scope of this project.

Currently, CHDB does not have any guideline, procedure, and organization related to environmental and social considerations. It is expected to prepare the criteria and selection procedure considering environment and social impact which is expected to be considered by the project for which CHDB is providing loan as a financial institute.

There is no guideline, procedure, and organization related to environmental and social consideration in DUHD. MOC is currently preparing the law and guidelines in the ministry. Following the preparation of law, procedures and organizations to ensure the compliance to Myanmar's environment and conservation law are expected to be prepared.





# Contents

<b>Chapter 1</b>	<b><i>Purpose of the Study and targetting area</i></b>	<b>12</b>
1.1	Background of the Study	12
1.2	Purpose of the Study	13
1.3	Target Area of the Study	13
1.4	Target housing for the Study	13
<b>Chapter 2</b>	<b><i>Legal and Institutional Framework for Housing Supply in Myanmar</i></b>	<b>14</b>
2.1	Legal Framework for Housing Supply	14
2.1.1	Urban & Regional Development Planning Bill	14
2.1.2	National Housing Development Bill	15
2.1.3	Myanmar National Building Code	15
2.1.4	Condominium Law	19
2.1.5	Laws and By-Laws of YCDC	21
2.2	Implementation Arrangement of Housing Supply	23
2.2.1	Administrative System in Myanmar	23
2.2.2	Outline of Housing Provision by Myanmar Government	24
2.2.3	Current housing situation and issues	24
2.2.4	Main Players of Housing Provision	25
2.3	Assistance of Donors in Housing Sector	27
2.3.1	Japan	27
2.3.2	Other Donors	29
<b>Chapter 3</b>	<b><i>Present Condition of Housing Supply by the Public Sector</i></b>	<b>31</b>
3.1	Housing Supply Plan and Present Condition	31
3.1.1	Projection of Urban Population in Myanmar	31
3.1.2	Housing Plan of Myanmar Government	31
3.2	Current Status of Housing Design/Building Permit	41
3.2.1	DUHD Design Status	41
3.2.2	Myanmar Architect Council, Myanmar Engineer Council	47
3.2.3	YCDC Building Permit Status	50
3.3	State of Housing Construction and Quality Control	57
3.3.1	State of Inspections and Quality Control	57
3.3.2	State of Management and Operation	67
3.3.3	Validation of Quality Aspects	68
<b>Chapter 4</b>	<b><i>Situation and Issues of Housing finance and related legal system</i></b>	<b>70</b>

<b>4.1</b>	<b>Overview of the Finance Market of Myanmar</b>	<b>70</b>
4.1.1	Overview of the Finance Market	70
4.1.2	Situation of Loan Business by Private Commercial Banks	72
<b>4.2</b>	<b>Current Situation and Issues of Housing Finance by CHDB</b>	<b>76</b>
4.2.1	Overview of CHDB	76
4.2.2	Existing housing loan services condition and problem on CHDB	82
<b>4.3</b>	<b>Legal Issues of Housing Market and Housing Finance</b>	<b>92</b>
4.3.1	Deficit of Unit Ownership (Pro rata Title)	92
4.3.2	Undeveloped Registration System of Mortgage and Issues of Mortgage Enforcement at a Court	94
<b>Chapter 5</b>	<b><i>Demand Survey for housing loans</i></b>	<b>96</b>
<b>5.1</b>	<b>Outline of the survey</b>	<b>96</b>
5.1.1	Objective of the survey	96
5.1.2	Method of the survey	96
5.1.3	Survey items	97
<b>5.2</b>	<b>Survey Results</b>	<b>97</b>
5.2.1	Characteristics of the interviewee	97
5.2.2	Household income and expenditure	102
5.2.3	Present residence	106
5.2.4	Funding for housing acquisition	108
5.2.5	Status of residential housing	112
5.2.6	Housing Acquisition Intention and Its Conditions	123
<b>5.3</b>	<b>Target of household for housing purchase</b>	<b>129</b>
5.3.1	Attributes of household head of housing purchasing applicant	130
5.3.2	Attributes of household which desires housings	132
5.3.3	Type of housings to be desired	136
<b>5.4</b>	<b>Estimation of eligible household for housing finance in Yangon</b>	<b>141</b>
5.4.1	Number of households which does not own housings in Yangon	141
5.4.2	Estimations of target households (1)	144
5.4.1	Estimations of target households (2)	144
5.4.2	<b>Attributes of Target households</b>	146
5.4.3	<b>Effect of the Low Interest Loan (1)</b>	147
5.4.4	<b>Effect of the Low Interest Loan (2)</b>	148
<b>Chapter 6</b>	<b><i>Consideration of Project SCHEME for housing Finance system</i></b>	<b>157</b>
<b>6.1</b>	<b>Discussion for the scheme</b>	<b>157</b>
6.1.1	Possible combination of entities for housing supply and fund supply	157
6.1.2	Consideration of the Implementation Scheme	160

6.1.3	Discussion about Fund Flow	162
6.1.4	Discussion about interest rate	165
<b>6.2</b>	<b>Disbursement Plan</b>	<b>166</b>
6.2.1	Definition of Batches	166
6.2.2	Allocation between batches	167
<b>6.3</b>	<b>Candidate Housing Units and Their Quality Improvement</b>	<b>168</b>
6.3.1	Candidate Housing Units for TSL Housing Loan	168
6.3.2	Framework for Ensuring Quality of Housing	169
6.3.3	Conditions for Loan Target Housings	172
<b>6.4</b>	<b>Other Matter to be Considered</b>	<b>173</b>
6.4.1	Clause of Prohibition of Lease and Resale	173
<b>Chapter 7</b>	<b><i>ENvironmentAl and Social Consideration</i></b>	<b>175</b>
<b>7.1</b>	<b>Myanmar's legislation and institutional frameworks for environmental and social consideration</b>	<b>175</b>
7.1.1	Legislation and standards for environmental and social consideration	175
7.1.2	Role of the relevant organizations	177
<b>7.2</b>	<b>Environmental and Social Consideration for the Project</b>	<b>177</b>
7.2.1	Sub-projects of the Project	177
7.2.2	Environmental and social considerations regarding housing construction project	178
<b>7.3</b>	<b>Institutional capacity of environmental and social consideration of executing agency</b>	<b>180</b>
7.3.1	Confirmation of institutional capacity of environmental and social consideration of executing agencies	181
7.3.2	Criteria and procedure to select sub-projects in regard to environmental and social consideration	181
<b>Chapter 8</b>	<b><i>Proposal for further development</i></b>	<b>189</b>
<b>8.1</b>	<b>Improving the Quality of Target Housing</b>	<b>189</b>
8.1.1	Handling for the 1st Batch Onwards	189
8.1.2	Driving the Project Forward and Improving the Quality of Housing Eligible for Financing	190
8.1.3	Balanced Assistance over the Demand and Supply Sides	191
<b>8.2</b>	<b>Necessity to Improve Legal System</b>	<b>192</b>
8.2.1	Establishment of Unit Ownership	192
8.2.2	Development of Mortgage Registration System and Procedures for Mortgage Enforcement	193

8.2.3	Establishment of Public Housing Finance Special Zone_____	194
-------	---	-----

## Contents (Table)

Table 1-1 Target Housing for the Study .....	13
Table 2-1 Draft Contents of Urban & Regional Development Planning Bill .....	14
Table 2-2 Contents of National Housing Development Bill.....	15
Table 2-3 MNBC Contents.....	16
Table 2-4 Outline of the Condominium Law.....	21
Table 2-5 Bylaws of YCDC Related to Urban Planning .....	22
Table 2-6 Contents of By-law on Building and Construction .....	23
Table 2-7 Housing Supply by DUHD .....	26
Table 3-1 Present and Future Urban Population of Major Cities in Myanmar.....	31
Table 3-2 Low Cost Housing Units under 2-year Program .....	36
Table 3-3 Affordable Housing Units under 2-year Program .....	36
Table 3-4 Low Cost Housing Units outside of 2-year Program .....	37
Table 3-5 Affordable Housing Units outside of 2-year Program.....	37
Table 3-6 Low Cost Housing Units outside of 2-year Program in Mandalay .....	39
Table 3-7 Low Cost Housing Units outside of 2-year Program in Nay Pyi Taw.....	40
Table 3-8 Cost Comparison of Two DUHD Standard Housing Models.....	45
Table 3-9 Number of Accredited Architects and Engineers .....	47
Table 3-10 Relationship between Building Height and Application Authority .....	50
Table 3-11 Considerations to Urban Planning and Architecture .....	51
Table 3-12 On Site Checks and Findings .....	63
Table 4-1 Deposit Situation of Citizens of Myanmar (2011-2015, Unit: million MMK).....	70
Table 4-2 The Number of Financial Institution (as of end of August 2016) .....	71
Table 4-3 Trend of Interest Rate (2006, 2010-2015) .....	73
Table 4-4 Summary of mortgage loan by Private Banks.....	74
Table 4-5 Low-cost Housing Development Project using mortgage loan by a Private Bank.....	75
Table 4-6 Existing services.....	78
Table 4-7 Statement of Financial Position.....	79
Table 4-8 Statement of comprehensive income.....	80
Table 4-9 Statement of changes inequity.....	80
Table 4-10 Statement Cash flow.....	81
Table 4-11 Loan service list on CHDB .....	82
Table 4-12 Supply number of Loans .....	83
Table 4-13 Standard of Rent Payment.....	87
Table 4-14 Fictional Case Studies of Resale Price and How to Deal with Surplus Amount.....	90
Table 5-1 Applicant for housing purchase.....	130
Table 5-2 Rise in household income .....	134
Table 5-3 Households living in rented housings in Yangon .....	143
Table 5-4 Household incomes in Yangon (SUDP(2012(JICA))) .....	144

Table 5-5 Target household's employment in Yangon .....	145
Table 5-6 Target household's job type in Yangon .....	145
Table 5-7 Age and Sex of the household head of Target households .....	146
Table 5-8 Type of housings desired by the Targeted households .....	146
Table 5-9 Present and future residential area of the Target households.....	146
Table 5-10 Residential location and type of housings desired of the Ttarget households.....	146
Table 5-11 Housing area and type of housing desired of the Target households.....	147
Table 5-12 Comparison between housing loan and Low Interest Loan .....	147
Table 5-13 Target of the housing loan and Low Interest Loan .....	148
Table 5-14 Household income without housing ownership .....	149
Table 5-15 Estimated household number with certain condition .....	150
Table 5-16 Comparison between the current housing loan and Low Interest Loan .....	150
Table 5-17 Comparison of estimated household number with certain condition .....	150
Table 5-18 Comparison of estimated household number with certain condition (2) .....	151
Table 5-19 Monthly rent fee and income of certain condition .....	152
Table 5-20 Monthly rent fee and income of certain condition (2) .....	154
Table 6-1 Combination of Housing Suppliers and Financial institutions to join.....	158
Table 6-2 Points to discuss: Comparison between FTD and Loan .....	164
Table 6-3 Batch and Target Housing .....	167
Table 6-4 Balance of Revolving Fund.....	168
Table 7-1 Screening Criteria for Tourism and Hospitality Development under Infrastructure and Service Development .....	178
Table 7-2 Screening Criteria for Water Supply .....	179
Table 7-3 The illustrative list of projects categorized as "Category A" based on JICA guideline .....	179
Table 7-4 Check list (example).....	182
Table 7-5 Check list (example).....	184

## Contents (Figure)

Figure 2-1 Organization of MOC (Five departments and Ministers Office).....	25
Figure 2-2 Organization of DUHD.....	27
Figure 2-3 Location of 9 Sites Owned by MOC .....	28
Figure3-1 One Million Housing Plan for 20 Years.....	32
Figure 3-2 Historical Trend in Housing Supply by MOC (1994-2010) .....	33
Figure 3-3 Historical Trend in Housing Supply by MOC (2011-2014) .....	33
Figure 3-4 DUHD Source of Housing Finance .....	34
Figure 3-5 Location of Major Low Cost Housing Projects in Yangon.....	35
Figure 3-6 Housing Units by DUHD in Yangon .....	38
Figure 3-7 Housing Units Plan and Elevation by DUHD .....	38
Figure 3-8 Mya Yee Nanda Low Cost Housing by DUHD and MCDC.....	39
Figure 3-9 Housing Units by DUHD in Nay Pyi Taw.....	40
Figure 3-10 Design, Permit, and Construction of DUHD Standard Design.....	42
Figure 3-11 Contents of Submission Regarding Low Cost and Affordable Housing Standard Design .....	42
Figure 3-12 Architectural Drawings of DUHD Mya Yee Nandar Low Cost Housing Design.....	43
Figure 3-13 Structural Drawings of DUHD Mya Yee Nandar Low Cost Housing Design.....	44
Figure 3-14 Professional Qualification and Accreditation for Architects in Myanmar .....	48
Figure 3-15 Professional Qualification/Accreditation for Engineers in Myanmar.....	49
Figure 3-16 Building Permit Flowchart for YCDC .....	53
Figure 3-17 YCDC Building Permit Application Items .....	54
Figure 3-18 YCDC Building Permit Requirements.....	55
Figure 3-19 Inspection system chart .....	57
Figure 3-20 Supervision Ledger.....	61
Figure 3-21 Supervision Ledger.....	62
Figure 3-22 Photographs of On-site Inspections Being Conducted .....	62
Figure 3-23 Supervision Ledger.....	63
Figure 3-24 Worksite Photographs .....	65
Figure 3-25 Worksite Photographs .....	65
Figure 3-26 Worksite Photographs .....	65
Figure 3-27 Performance Certificates for Concrete and Steel Rebar Issued by the MES Quality Control Laboratory .....	66
Figure 3-28 MES Quality Control Laboratory Testing Equipment .....	67
Figure 3-29 Management Framework Diagram.....	67
Figure 4-1 Two party agreement scheme for general mortgage loan .....	76
Figure 4-2 Human Resources Plan for Year of 2021 .....	77
Figure 4-3 Occupation of housing mortgage loan customer .....	83
Figure 4-4 Investigation flow on CHDB's housing lone.....	85

Figure 4-5 Tri party agreement scheme.....	86
Figure 4-6 A Model Case Study of Sales of Housing Unit by 10 million MMK .....	89
Figure 5-1 Household member (Yangon) .....	97
Figure 5-2 Household member (Mandalay) .....	98
Figure 5-3 Household member (Bago) .....	98
Figure 5-4 Household heads Education level (Yangon) .....	99
Figure 5-5 Household heads Education level (Mandalay) .....	99
Figure 5-6 Household heads Education level (Bago) .....	100
Figure 5-7 Household heads Occupation (Yangon) .....	100
Figure 5-8 Household heads Occupation (Mandalay) .....	100
Figure 5-9 Household heads Occupation (Bago) .....	101
Figure 5-10 Household heads Occupation condition (Yangon) .....	101
Figure 5-11 Household heads Occupation condition (Mandalay) .....	101
Figure 5-12 Household heads Occupation condition (Bago) .....	102
Figure 5-13 Monthly household income (2017) .....	102
Figure 5-14 Monthly household income (2016) .....	103
Figure 5-15 Monthly household income (2015) .....	103
Figure 5-16 Monthly household expenditure .....	104
Figure 5-17 Monthly household expenditure (Water supply) .....	104
Figure 5-18 Monthly household expenditure (Electricity).....	105
Figure 5-19 Car ownership.....	105
Figure 5-20 Motorcycle ownership .....	106
Figure 5-21 The number of years of residence of the current house .....	107
Figure 5-22 After composing household, living in the current residence.....	107
Figure 5-23 Previous residence when moved after composing household.....	108
Figure 5-24 reason of moving .....	108
Figure 5-25 Bank account .....	109
Figure 5-26 Bank which have an account .....	109
Figure 5-27 Holding rate of credit card.....	110
Figure 5-28 Presence / absence of borrowing .....	110
Figure 5-29 Borrowing period.....	111
Figure 5-30 Borrowing amount.....	111
Figure 5-31 Awareness of housing loans.....	112
Figure 5-32 Awareness of CHDB.....	112
Figure 5-33 type of housing .....	113
Figure 5-34 Main material of the roof.....	113
Figure 5-35 Main material of the wall.....	114
Figure 5-36 Main material of the floor.....	114
Figure 5-37 Structure of housing.....	115
Figure 5-38 Maintenance condition .....	115



Figure 5-39 Ownership of housing.....	116
Figure 5-40 time of payment when self-owned.....	116
Figure 5-41 amount of payment when self-owned.....	117
Figure 5-42 Source of money for payment.....	117
Figure 5-43 Land use right ownership .....	118
Figure 5-44 amount of payment for the land.....	118
Figure 5-45 amount of payment per month if rented.....	119
Figure 5-46 Land area .....	119
Figure 5-47 Housing area.....	120
Figure 5-48 Number of rooms.....	120
Figure 5-49 Age of housing.....	121
Figure 5-50 Infrastructure connection status (Yangon).....	121
Figure 5-51 Infrastructure connection status (Mandalay) .....	121
Figure 5-52 Infrastructure connection status (Bago).....	122
Figure 5-53 Ownership status of various facilities (Yangon).....	122
Figure 5-54 Ownership status of various facilities (Mandalay) .....	122
Figure 5-55 Ownership status of various facilities (Bago).....	123
Figure 5-56 Current housing satisfaction .....	123
Figure 5-57 Intention to acquire housing .....	124
Figure 5-58 When to acquire housing .....	124
Figure 5-59 Type of housing you want.....	125
Figure 5-60 Desired commuting time from the desired housing.....	125
Figure 5-61 Type of commuting from the desired housing .....	126
Figure 5-62 Newly building or second hand of the desired housing.....	126
Figure 5-63 Points you want to emphasize in acquiring housing.....	127
Figure 5-64 The area of the desired housing .....	127
Figure 5-65 Number of rooms of the desired housing.....	128
Figure 5-66 Maximum payment limit for housing purchase.....	128
Figure 5-67 Hope to use a mortgage loan or not.....	129
Figure 5-68 Monthly payable amount when using mortgage loan.....	129
Figure 5-69 Occupation of the household head which desires housings.....	130
Figure 5-70 Employment form of household head which desires housings.....	131
Figure 5-71 Employment period of household head which desires housings .....	131
Figure 5-72 Non-working period of household head which desires housings .....	132
Figure 5-73 Current residence type of those who desire housings.....	133
Figure 5-74 Household monthly income of 2016 which desires housings.....	133
Figure 5-75 Bank account holding status of those who desires housings .....	134
Figure 5-76 Form of ownership of the current residence of those who desires housings .....	135
Figure 5-77 Payment resources for the current residence of those who desires housings.....	135
Figure 5-78 Monthly rent fee of the current residence.....	136

Figure 5-79 Timing of purchasing housings of those who desires housings .....	137
Figure 5-80 Type of housings desired of those who desires housings.....	137
Figure 5-81 Type of housings desired of those who desires housings (New/Second hand).....	138
Figure 5-82 Location of the desired housings of those who desires housings .....	138
Figure 5-83 Reason to desire housings of those who desires housings.....	139
Figure 5-84 Housing area to be desired of those who desires housings.....	139
Figure 5-85 Number of rooms desired of those who desires housings.....	140
Figure 5-86 Maximum fee of purchasing housings of those who desires housings.....	140
Figure 5-87 To use mortgage loan or not of those who desires housings.....	141
Figure 5-88 Targeted Area of SUDP (Yangon) .....	142
Figure 5-89 Distribution map of SUDP (2012JICA) HIS interview in Yangon (Reference) .....	155
Figure 5-90 Distribution map of monthly income>0.3mil. at SUDP (2012JICA) HIS interview in Yangon (Reference).....	155
Figure 5-91 Distribution map of monthly income>0.3mil. at this survey (Reference) .....	156
Figure 6-1 Scheme of TSL for SME .....	160
Figure 6-2 Scheme of TS Mortgage Loan 1st Batch .....	161
Figure 6-3 Expecting Scheme after participation of private banks .....	162
Figure 6-4 Fund Flow for TS Mortgage Loan.....	163
Figure 7-1 Process to obtain ECC .....	176
Figure 7-2 Flow for selecting eligible projects based on the checklist (example) .....	183
Figure 8-1 Balanced Assistance over the Supply and Demand .....	192

AMA	Association of Myanmar Architects
ASCE	American Society of Civil Engineers
BCR	Building Coverage Ratio
CBD	Central Business District
CHDB	Construction and Housing Development Bank
CQHP	Committee for Quality Control of High-Rise Building Construction Project
DUHD	Department of Urban and Housing Development
ECC	Environmental Compliance Certificate
EIA	Environmental Impact Assessment
FAR	Floor Area Ratio
HIC	Highrise Inspection Committee
IFC	International Finance Corporation
JBIC	Japan Bank for International Cooperation
JHF	Japan Housing Finance Agency
JICA	Japan International Cooperation Agency
MAC	Myanmar Architect Council
MCDC	Mandalay City Development Committee
MFSD	Myanmar Fire Services Department
MEC	Myanmar Engineering Council
MES	Myanmar Engineering Society
MIC	Myanmar Investment Commission
MLIT	Ministry of Land, Infrastructure Transport and Tourism, Government of Japan
MNBC	Myanmar National Building Code
MOC	Ministry of Construction, Government of Myanmar
MOPF	Ministry of Planning and Finance
NDC	Nay Pyi Taw Development Committee
NCDC	Nay Pyi Taw City Development Committee
NPO	Nonprofit Organization
ODA	Official Development Assistance
PPV	Project Promotion Vehicle
TSL	Two Step Loan
UN	United Nations
WB	World Bank
YCDC	Yangon City Development Committee
YRG	Yangon Region Government

# **Chapter 1      PURPOSE OF THE STUDY AND TARGETTING AREA**

## **1.1 Background of the Study**

With the rapid economic growth of Myanmar in recent years, population inflows into urban areas and the shortage of housing accompanying this have become obvious. According to estimates by the Department of Urban and Housing Development (DUHD), the Ministry of Construction of Myanmar (MOC), as of 2014, 15.44 million population, about 30% of the total population of 51.48 million in the country, live in urban areas. Also it is said that 1.67% (about 260,000) population growth and about 60,000 housing demands occur every year. This trend is even more prominent in Yangon which is the largest city in Myanmar. According to the Urban Development Master Plans created in Yangon in cooperation with JICA in 2016, population of the Yangon metropolitan area is 5.54 million in 2014, and this will be 10.8 million in 2040, nearly doubling in 25 years, and about 1.2 million housing supply will be needed meantime.

In response to these circumstances, DUHD intends to strengthen its legislation and policy such as enactment of housing development law, condominium legislation, etc., while also focusing on housing supply itself. In 20 years from 2011 to 2030 together with the public and private sectors, DUHD plans to implement a housing supply plan of 1 million houses. DUHD emphasizes housing policy for low and middle income people in particular, and even in the one million housing supply plan, 90% of the 200,000 houses DUHD is planning to build by itself is for low-income people; the rest of the 10% houses is for low and middle-income people. Along with these, as important measures, the housing finance system that supports low and middle income population to buy their own housing especially long-term low interest loans, is in place.

Regarding housing finance, the Construction and Housing Development Bank (CHDB) was established in 2013 as the executing agency. CHDB provides mortgage loans for individuals and housing construction loans for housing developers. It is a domestic government bank specialized in housing finance and a domestic bank which is able to provide housing loans during several years. This housing mortgage business with CHDB has just started full-fledged operations since 2016 after the pilot in 2015, and at this time both the loan target and the actual result are limited.

There is a recognition that expansion of projects for housing business operators and purchasers by CHDB is essential in solving the housing policy problems faced in Myanmar. Under this recognition, Japanese agencies such as the Ministry of Land, Infrastructure Transport and Tourism (MLIT), Japan Housing Finance Agency, JICA, etc., have conducted various supports as like dispatch of experts, training for MOC and CHDB staffs invited to Japan, etc.. However, in order to expand the business, it is indispensable to organize and solve problems in a wide range of fields, such as financing methods, arrangement of legal systems to support the loan system, and improvement of financial infrastructure.

## 1.2 Purpose of the Study

On the premise of the background recognition as above, the Study will address the followings for fundamental improvement of housing finance system in Myanmar.

① Confirm the current status of the current housing finance system and its premised housing policy and relevant legal system.

② Gather and organize information on the current situation and intent of housing operators, homebuyers, CHDB and other stakeholders.

③ Implement recommendations of specific projects, etc. for each institution of Myanmar government and CHDB, with the measures to be taken in future as well as loan aid cooperation in mind, in order to expand the housing finance system.

## 1.3 Target Area of the Study

The Study assumes Yangon metropolitan areas and Mandalay and other major cities where the rapid urbanization and the associated housing problems are emerging as target cities for actual surveys.

## 1.4 Target housing for the Study

Based on the background recognition as above, the target of this Study was discussed with the Myanmar side, then it was agreed that the basic feature of the target housing of this Study shall be as follows (red frame in the table below):

**Table 1-1 Target Housing for the Study**

Housing Category	Low			Middle	High
	Needy	Low Cost	Affordable		
Monthly Regular Income (Household)	MMK 0.1 Million	MMK 0.3 - 0.5 Million	MMK 0.5 -1.0 Million	MMK 1 – 1.5 Million	MMK 1.5 Mil. or more
Average Size Price (MMK Mil. per housing unit)	MMK 6 Million	MMK 10 - 27 Million	MMK 27 - 50 Million	MMK60 Million	
Average Size	150 Sq.ft.	300 - 800 Sq.ft.	800-1,200 Sq.ft.	600 Sq.ft.	

## Chapter 2      **LEGAL AND INSTITUTIONAL FRAMEWORK FOR HOUSING SUPPLY IN MYANMAR**

### 2.1   **Legal Framework for Housing Supply**

In Myanmar, although there have been some preparations for laws and regulations for the building codes and construction permit systems, they have not been effected yet. In Myanmar, establishment of legal framework has started since 2014, which includes the drafting of Urban & Regional Development Planning Bill and Myanmar National Building Code and National Housing Development Bill. Even though the relevant laws have not been formally legislated yet, YCDC is conducting the development permit systems in operation.

#### 2.1.1      **Urban & Regional Development Planning Bill**

This Bill includes 16 Chapters and 77 Articles in all, and defines, among others, establishment of Urban and Housing Development Region/State Committee, tasks of concerned departments and types of plans to be formulated.

In its preparation, MOC submitted a sketch in November 2014, and a first draft in December 2014 was shared to the Japanese side. The Japanese side provided comments in the Vice-Ministerial Conference in January 2015 and in the Professional Meeting in August 2015. The draft has been circulated to State & Region Governments as well as concerned Union Ministries for getting comments. A final draft was then prepared and up to now, the Bill has been revised 7 times based on comments of Union Attorney General Office (UAGO).

**Table 2-1 Draft Contents of Urban & Regional Development Planning Bill**

Chapter 1	Name & Definition
Chapter 2	Objectives
Chapter 3	Identifying Urban and Regional Plan framework and Supervising the Activities of Urban and Regional Plan
Chapter 4	Organizing Urban and Housing Development Union Committee and its Tasks
Chapter 5	Organizing Urban and Housing Development Region/State Committee and Self-Administered Division and its Task
Chapter 6	Task of Department
Chapter 7	Classifying the Types of Urban and Regional Plans
Chapter 8	Formulating Urban Plans
Chapter 9	Evaluating and Modifying Urban Plans
Chapter 10	Reviewing and Modifying Urban Plans
Chapter 11	Budget Resources for Implementing Urban Planning Activities
Chapter 12	Getting Planning Permit for Conducting Urban Development Activities
Chapter 13	Taking Action in Implementing Urban Plan
Chapter 14	Appealing
Chapter 15	Offences and Penalties
Chapter 16	Miscellaneous

Source: Based on documents from MOC, copied by Consultant

### 2.1.2 National Housing Development Bill

Similar to Urban & Regional Development Planning Bill, National Housing Development Bill was drafted and approved by Minister of Construction, and submitted to UAGO for consideration, and is under final revision based on their comments.

This bill includes 14 Chapter and 55 Articles, and covers the regulation related to the use of public land for housing, supply of housings, and establishment of committees in the state/region and autonomous local government levels.

The legislation of the bill will be applied to housing supply by private developers on both public lands and private lands. According to DUHD, the bill is expected to be a project-based development permit. How to address multiple-year projects and close proximity multiple development projects needs to be specified. In the bill, there are provisions of the housing development organization and the housing management organization. Although they are under the jurisdiction of the MOC, they are independent organizations (not government administrative bodies), and ownership of development property belongs to each organization.

The bill does not clearly define the development permit, the authority of the housing development organization, the composition of organization, procedures, the authority of the developers, and the procedure of applying for the development permit, so that it is necessary to materialize in the bill.

**Table 2-2 Contents of National Housing Development Bill**

Chapter 1	Name and Definitions
Chapter 2	Objectives
Chapter 3	Specifying National Housing Development Policy and Steering the Housing Development Activities
Chapter 4	Organizing National Housing Development Central Committee and its Responsibilities
Chapter 5	Organizing the Regional or State or Self-Administered Division or Self-Administered Region Housing Development Committee and its Responsibilities
Chapter 6	Responsibilities of the Department of Urban and Housing Development
Chapter 7	Organizing the Housing Development Body and Budget Sources
Chapter 8	Formulation and Implementation of the National Housing Plans and Getting the Lands for the Projects
Chapter 9	Supervising the Developers and Granting the Business License
Chapter 10	Organizing the Housing Management Body and its Responsibilities
Chapter 11	Organizing the Housing Development Committee and its Responsibilities
Chapter 12	Prohibitions
Chapter 13	Penalties
Chapter 14	Miscellaneous

Source: Based on documents from MOC, copied by Consultant

### 2.1.3 Myanmar National Building Code

#### (1) Design Standards

MNBC is the unified building code for Myanmar giving both safety and city planning standards in building permit, with the aims to secure building safety in disasters, improve the living environment, and standardize architectural design and construction, produced through the consignment towards the Myanmar Architect

Council (MAC) and Myanmar Engineering Society (MES) by the DUHD. Progress towards legislation has been made since 2015, and MNBC2016 was announced subsequently. Approval was made at the cabinet meeting and MNBC is currently regarded as the guideline based on which local authorities conduct building permit.

MNBC was originally drafted by Technical Working Group (TWGs) of MES with funding assistance from UN HABITAT and its contents were sauced from building standards of countries such as the United States, India, Malaysia, Philippines and Indonesia. It is said to contain issues such as incoherence, inappropriateness to Myanmar's actual local conditions, and the lack of dissemination of skill and technologies within Myanmar.

**Table 2-3 MNBC Contents**

Chapter 1	<p>Planning, Environment, Administration and Legislation</p> <p>Chapter 1 stipulates the limits of power of development planning and building authority in terms of their organization, qualification, as well as approval/inspection process. It also stipulates zoning and land use, permit and application requirements, as well as the responsibilities of owner developer and qualified personal.</p>
Chapter 2	<p>Architecture and Urban Design</p> <p>Chapter 2 stipulates building usage and occupancy classification, architectural requirements, floor area and height limits internal parts such as elevator and courtyards, means of egress, barrier free access, and the construction of exterior walls/roof/openings. It also includes urban planning regulations and environmental considerations such as regulations regarding historical buildings, distance between buildings, setback, and car parking.</p>
Chapter 3	<p>Structural Design</p> <p>Chapter 3 stipulates structural requirements and key definitions such as dead load, live load, wind load and seismic resistant structure in structural design. It also contains details on specifications of materials such as concrete, steel, and plaster and various constructions.</p>
Chapter 4	<p>Soils and Foundations</p> <p>Chapter 4 stipulates regulations regarding soil and foundation, such as soil and rock classification, geotechnical site investigation method, excavation and fill, as well as various design requirements in footing and foundation design.</p>
Chapter 5	<p>Building Services</p> <p>Chapter 5 stipulates regulations on artificial lighting, design of electrical and mechanical services including wiring and circuits, as well as design requirements on elevators and escalators. Regulations on water and drainage, fire services are also contained.</p>
Chapter 6	<p>Building Materials</p> <p>Chapter 6 contains acceptable international standards regarding specifications of</p>



	various building materials and components such as doors and windows, paint and sanitary ware.
Chapter 7	Constructional Practices and Safety Chapter 7 stipulates regulations regarding the handling of materials, as well as safety requirements in the construction, maintenance/repairs, and demolition of buildings.

Source: materials from MOC, compiled by JICA research team

MNBC covers a wide range of areas and is partially based on IBC 2006. It also incorporates American Society of Civil Engineers (ASCE) Standards 7-05 for wind and seismic provisions. Prior to year 2000, only YCDC by laws (including those listed in Table 2-3) were active and seismic design was not required. In the years between 2000 and 2010, “Committee for Quality Control of High-Rise Building Construction Projects”, or CQHP, was formed and adopted the Uniform Building Code (UBC) 1997 for seismic design guidelines<sup>1</sup>. Another regulation used by YCDC as a standard basis is the ACI-318-99: “Building Code Requirements for Structural Concrete and Commentary”

For high rise building, senior architects (accredited by Myanmar Architect Association) and senior engineers (accredited by Myanmar Engineer Association) are required to design and certify all aspects of a design.

Towards the legalization of the MNBC, revisions are being carried out to deal with issues such as those listed above, including comments from review committees and experts from authorities currently responsible. Workshops and orientations are also being conducted to improve the understanding of local authority staff, in order to apply the technical regulations of MNBC even on a local, municipality level.

MNBC is entering into implementation phase subject to formalization by the Myanmar parliament. While MOC aimed to have it formalized in 2016, MNBC remains currently legally unimplemented. Its legal status, and future likely amendments, its selective applicability by YCDC, or its enforceability in the greater regions, will continually be a topic for Myanmar authorities in the future.

## (2) Earthquake Resistant Design

The earthquake resistance standards of MNBC2016 is modelled on the American earthquake resistance standards- ASCE 7-05, which ensures no collapse or damage under earthquake motions 2/3 times that of the largest earthquake anticipated once every 2500 years. It is different to the Japanese earthquake resistance standards, which ensures no damage in a medium size earthquake and no collapse or damage in a large scale earthquake. MNBC 2016 allows the use of both ASCE 7-05 and UBC 1997 for earthquake resistance design. While IBC is not directly referenced in MNBC, the calculation method of ASCE is acceptable as stated in 3.4.1.4.7; As the IBC standard earthquake loading and calculation method, ASCE7-05 (earthquake resistant

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<sup>1</sup> Presentation “Seismic Deign Code of Myanmar and 2016 Chauk Earthquake” by Saw Htwe Zaw, of Secretary Myanmar Earthquake Committee, presented in Seismic Reinforcement Seminar for Collective Housings in Myanmar 27 Dec 2016 at DUHD, Yangon Office.

structure) is stated in MNBC section 3.4 (3.4.1 - 3.4.4) for earthquake loading and calculation, and section 3.3 (3.3.1 – 3.3.6) for wind loading. In terms of earthquake loading, the hazard map of UBC1997 and other hazard maps and tables applicable are included in 3.4.1 of MNBC, and the UBC calculation methods are deemed acceptable in 3.4.1.4.7. Reference to ASCE standards are also made in various parts of MNBC.

UBC1997 is still frequently used for structural calculations by local engineers in Myanmar. Structural analysis soft wares such as ETABS, STAAT PRO, TRAKLAR are used by local engineers.

Under YCDC regulations, the structural calculations for buildings under 8.5 stories require considerations of four types of loadings: live load, dead load, façade load, and finishing load, while earthquake resistant structural design is not obliged. However, for buildings above 9 stories, wind loading and earthquake loading are additionally required. Under section 3.4.11 of MNBC, all buildings are to be designed as earthquake resistant structures EXCEPT for the four types of structures below:

- a. Detached one- and two- family dwellings (under certain location/foundation parameters);
- b. Detached one- and two- family wood-frame dwellings not included above with not more than two stories;
- c. Agricultural storage structures intended only for incidental human occupancy;
- d. Structures that require special consideration and for which other regulations provide seismic criteria, such as vehicular bridges, electrical transmission towers, hydraulic structures, and buried utility lines etc.)

The following is also stated in section 3.1.3.11:

#### 3.1.3.11 Wind and Seismic Detailing

Where required by the authority department, lateral-force-resisting systems shall meet seismic detailing requirements and limitations prescribed in this PART and ASCE7, excluding Chapter 14 and Appendix 11A, even when wind code prescribed load effects are greater than seismic load effects.

Furthermore, the application of the standards by YCDC and other authorities are not clearly stated, and exceptions deemed acceptable by authority are not yet found. The basis for the current exception for buildings under 8 stories will be the subject of the next phase of investigation.

For YCDC low cost and affordable housing standard designs, the four loadings stated above – live load, dead load, façade load, and finish load are appropriately taken into consideration and adopted into structural calculations. However, earthquake resistance calculations are not carried out as they are deemed inapplicable. Despite the fact that it has become mandatory since 2003 for structural calculations for earthquake resistance to be carried out for buildings above 8 stories, they are not carried out for 98% of buildings under 8 stories. The 2% exceptions are limited to schools or hospitals, or properties where the owners desire earthquake resistance.

While Myanmar designers are aware that high rise buildings are subject to earthquake loading, for buildings under 8 stories they don't even propose earthquake resistant designs to clients.

As Mandalay is located in a high earthquake hazard region, the low cost/affordable housings in Mandalay are designed as earthquake resistant structures despite being less than 8 stories in height, by carrying out structural calculations using ETABS and making adjustments to column and beam sizes or steel reinforcement etc. However, as such drawings or ETABS data are not submitted to MCDC, procedures such as building approval assessment are not carried out by MCDC (see 3.2.4 for details).

#### 2.1.4 Condominium Law

Traditionally, in the Myanmar Law, buildings are known as belonging of lands and regarded as a part of land as a whole (Myanmar Registration Law Article 2 (6), 9). This is why unit ownership of a building unit has not been admitted (details are written in 4.3.1). In contrast, the Condominium Act was enacted in January 2016, and a room (unit) of condominiums with 6 stories or more to be built on the land registered in accordance with the law is regarded as an independent property, and unit ownership of apartment units is admitted. In addition, as an exception to the 1882 Property Transfer Law, the Condominium Law allows foreigners to possess immovable properties (although unit ownership of foreigners cannot exceed 40% of the total.<sup>2</sup> Regarding land ownership, the upper limit will not be 40% and it is supposed to be recalculated according to another standard).

Buyers of condominium units can own units by registering the transfer of the property. Registration will be under the jurisdiction of the MOC. Registration bureau of MOC is scheduled to be set up in each local government, and registration will be indispensable requirement in condominium sales in addition to a sales contract. According to the DUHD Legal Department, the notice of information on registered owner is undecided. However, DUHD is considering establishment of a mechanism that allows a third party to confirm the registered owner of a condominium unit by issuing a certificate, etc.

In addition to ownership of units, buyers can simultaneously share the land of the target condominium with other unit owners and use it according to the ownership percentage of the unit. This right to a land is also expected to be registered at the registration office under the jurisdiction of MOC, though this registration is regarded as a system different from the registration of the land under the jurisdiction of the Ministry of Agriculture, Livestock and Irrigation (MOALI).<sup>3</sup>

Therefore, it is necessary to ensure consistency between land registration records of MOALI and the registered record of MOC about owners of a shared land attached to unit ownership of condominiums. MOC

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<sup>2</sup> It is scheduled to establish a Condominium Management Committee in each city and monitor the registration status on whether or not foreign ownership is 40% or less when reselling proceeds.

<sup>3</sup> Normally, when buying and selling land, a buyer concludes a sales contract of immovable property, pays tax at Ministry of Finance, Internal Revenue Department, and registers the sales contract at MOALI. In addition, it will be necessary to notify the transfer of immovable property in the newspaper afterwards, and to change the land register at YCDC or the Ministry of Home Affairs, General Affairs Department (GAD). Takeshi Mukawa, Kana Manabe, Atsushi Inoue, Legal Front Line in Myanmar: Theory and Practice, Shojihoumu, 2016, p.220.

and MOALI are conducting meetings and workshops and discussing this issue. In addition, in Myanmar, in the sales of immovable properties, it is necessary to change the register of lands at YCDC or the Ministry of Home Affairs, General Affairs Department (GAD) after registering at MOALI. However, according to YCDC City Planning & Land Administration Department, the relationship between the registry of GAD and the registration system of the Condominium Law is still unknown. When constructing a condominium it is necessary to apply to the administrative committee scheduled to be set up in each city. A scheme to contact to YCDC from the committee about owners is also considered.

Unit owners have the right to use, transfer, exchange, designate, abandon, lease and set up mortgage on units. In addition, the owner can assign units, lease and set collateral to foreigners. According to the DUHD Legal Department, it expects that method of mortgage on a unit should be the one to deposit ownership book to a bank (mortgage by keeping title deed as collateral), and a system that registers mortgage on units is not considered.<sup>4</sup> When reselling a condominium unit, ownership of the land is also transferred to the resale destination together with the transfer of the corresponding housing unit.

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<sup>4</sup> According to the DUHD Legal Department, because there was no idea of mortgage registration, it is necessary to have a guidance as a reference if there is a system like registration of mortgages in Japan.

**Table 2-4 Outline of the Condominium Law**

Chapter 1	Name and Definition
Chapter 2	Objectives
Chapter 3	Formation of the Administrative Committee and Functions and Duties
Chapter 4	Duties and Functions of the Department
Chapter 5	Registration and Establishment of Condominium
Chapter 6	Registration
Chapter 7	Rights and Duties of the Developer
Chapter 8	Rights and Duties of the Collective Owners
Chapter 9	Demolition and Reconstruction of the Condominium
Chapter 10	Offence and Penalty
Chapter 11	Miscellaneous

Source: Made by JICA Study Team referring to the Condominium Law

The Condominium Law was enacted in 2016. However, since it took time to legislate rules for operation, it was in fact in a state where it was not enforced effectively. After that, discussions were held repeatedly at the DUHD Advisory Council, etc., and the rule was enacted on December 7th, 2017, and full-scale operation of the Law began. The rule provides that the business of condominium sale can be conducted under permission system and that permission is necessary for construction and sale for each property development. In addition the rule determines regulation on sales time, advance payment sorting management, upper limit on sale for foreigners, registration system for condominium units, and management associations.<sup>5</sup>

The Condominium Law targets condominium units of high rise buildings with more than six stories and it is said by DUHD that the Law assumes luxury apartment houses as the main target. Therefore it is a system that is difficult to be applied to collective housing which is generally low cost or affordable for Myanmar population who needs housing. For this reason, it is currently under consideration to establish the “Apartment, Housing and Building Law” which admits unit ownership and targets less expensive apartment houses by DUHD.<sup>6</sup>

### 2.1.5 Laws and By-Laws of YCDC

In Myanmar, there are three CDCs (City Development Committee) established in Yangon, Mandalay and Nay Pyi Taw as part of the respective local governments. In case of Yangon, it is called Yangon City Development Committee (YCDC), and MCDC in Mandalay, and NCDC in Nay Pyi Taw.

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<sup>5</sup> Mori Hamada & Matsumoto, MHM Asian Legal Insights, Vol.81 (January 2018), pp.3-4.

<sup>6</sup> According to the information as of Aug. 2017, Apartment Law is different from Condominium Law in the point that it does not grant land rights to unit purchasers.

## (1) City of Yangon Development Law

YCDC was established based on this law enacted in 1990 in order to carry out development projects effectively. This Law, among others, stipulates the duties and responsibilities of YCDC as in the following.

- preparation of civil projects and establishment of new towns
- administration of lands
- construction, repairing and demolition of buildings; squatter buildings and squatter wards
- demolition and re-settlement of squatter huts, squatter buildings and squatter wards
- construction, repairing and demolition of buildings
- demolition and redevelopment of illegal huts and buildings

## (2) By-Laws of YCDC

YCDC has enacted 24 By-Laws between 1995 and 2001, which includes four By-Laws that are related to urban development.

**Table 2-5 Bylaws of YCDC Related to Urban Planning**

Name	Main Stipulation
Bylaw on Town Planning and Land Use (No.3/2001) (May 7, 2001)	<ul style="list-style-type: none"><li>• Land management (Chapter 2)</li><li>• Formulation of city development plans (Chapter 2)</li><li>• Land use in accordance with the city development project/ plan (Chapter 4)</li><li>• Issuance of lease, license and permits, renewal and cancellation (Chapter 5)</li><li>• Assessment of tax, revenue, collection, exemption, and subsidization of tax for land (Chapter 6)</li><li>• Land confiscation, and buy and transfer of land (Chapter 7)</li><li>• Management of non-moveable/ fixed infrastructure (Chapter 8)</li><li>• Records, prescribe forms, maintenance of records, and duplication (Chapter 9)</li><li>• Land survey (Chapter 10)</li><li>• Removal of squatters and trespassers (Chapter 11)</li><li>• Appeal (Chapter 12)</li></ul>
Bylaw on Building and Construction (No.9/1999) (December 22, 1999)	<ul style="list-style-type: none"><li>• Permission and application for construction (Chapter 2)</li><li>• Issuance of license (Chapter 3)</li><li>• Buildings owned by the committee (Chapter 4)</li><li>• Buildings inappropriate or dangerous for residences (Chapter 5)</li><li>• Trespassing tax (Chapter 6)</li><li>• Sign boards and advertisement ads (Chapter 7)</li><li>• Prohibitions (Chapter 8)</li></ul>
Bylaw for Commerce and Markets (December 22, 1999)	<ul style="list-style-type: none"><li>• Supervision of the development affairs (Chapter 2)</li><li>• Restrictions (Chapter 3)</li></ul>
Bylaw for Garden and	<ul style="list-style-type: none"><li>• Gardens (Chapter 2)</li></ul>

Recreation (December 22, 1999)	<ul style="list-style-type: none"> <li>• Playgrounds (Chapter 3)</li> <li>• Prohibitions (Chapter 4)</li> </ul>
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Source: Based on documents from YCDC, copied by Consultant

In particular, By-law on Building and Construction (No.9/1999) stipulates the application and issuance of building permits, based on which the system is said to be administered.

**Table 2-6 Contents of By-law on Building and Construction**

Chapter 1	Titles and Definitions
Chapter 2	Permission and Application for Construction
Chapter 3	Issuing License
Chapter 4	Buildings owned by the Committee
Chapter 5	Buildings inappropriate or dangerous for residences
Chapter 6	Trespassing Tax
Chapter 7	Sign Boards and Advertisement Ads
Chapter 8	Prohibitions
Chapter 9	General

Source: Based on documents from YCDC, copied by Consultant

## **2.2 Implementation Arrangement of Housing Supply**

### **2.2.1 Administrative System in Myanmar**

In the Union of Myanmar the administrative responsibilities are shared by the Union Government for the union. And State/Region governments. The Union Government is composed of President, Vice-President, Union Ministers and others, and the administrative power is given to the President. Under the President Office, there are ministries established for respective area of administration.

The Constitution of the Union of Myanmar defines the State/Region Governments as the local governments. Thus that there are seven state and even region governments, together with Nay Pyi Taw, which is a Union Territory comparable to State/Region. Each State/Region is then divided into Districts.

While the Constitution does not give specific definition for a city, there have been City Development Committees (CDCs) even before the Constitution, and there are three CDCs at present: Yangon, Mandalay and Nay Pyi Taw. In the case of Yangon, there is Yangon City Development Committee, or YCDC. The Chairman of YCDC is often called Mayor, and is normally assigned concurrently as Minister for Development of Yangon Region Government.

YCDC is reportedly launching a project to supply housing units in collaboration with some commercial banks to provide housing loans. The number of units is unknown precisely. On the other hand, YCDC functions as a regulator in DUHD's housing supply to provide construction permits.

### **2.2.2 Outline of Housing Provision by Myanmar Government**

In the Union of Myanmar (Federation of Burma), after independence in 1947, housing construction continued in waves that corresponds to the shift of political system.

The Ministry of Housing Supply and the National Housing Board (NHB) was established in 1951 after World War II and it was decided to proceed with construction of 1,000 units annually from the 1950s to the 1960s<sup>7</sup> under the national housing policy. In the 1960s, as a countermeasure to residents flowing into Yangon City, it was decided to expand the Yangon area and newly construct three new residential areas to build houses.

After the stagnation in the socialist era, the era of SLORC and SPDC, the Department of Human Settlement and Housing Development (DHSHD) was established in the Ministry of Construction in 1990 taking the main responsibilities of NHB, mainly focusing on the construction of civil servants houses. In the meantime, the planned number of plans for construction was set at 230,000 units in the Yangon metropolitan area for 20 years from 1990 to 2010, and 100,000 units in other cities.

In this period, in addition to enhancing the central government's housing countermeasure organization, the development of the local government's system also progressed. YCDC was founded in Yangon in 1990, MCDC in Mandalay in 1994, and these local bodies started to provide housing together with DHSHD.

However, with the full-scale construction project of the new capital Nay Pyi Taw, investment for building urban infrastructure and construction of houses was diverted from Yangon (from where the capital functions were to be relocated); Yangon again entered into a period of stagnation. Housing development in Yangon restarted with the establishment of the Thein Sein administration in 2011. Furthermore, as the NLD administration in 2016 was formed, improvement of the lives of citizens was positioned as an important agenda, and acceleration of housing supply was proposed.

### **2.2.3 Current housing situation and issues**

According to the results of the census conducted in 2014, the housing stock in Myanmar is 11 million units, 1,580,000 of which are in Yangon, and 1,300,000 of which in Mandalay. It is estimated that the number of households in the census is equal to the number of houses.

Apart from owner-occupied houses and rental properties, 57% of households in Yangon (urban areas) are owned, 31% are rented, and others (free of charge / uncertain) are 12%.

As for amenities, there is a big gap in urban and rural areas. Regarding the electrification rate, the Yangon urban area has reached 87%, while within the same Yangon Region it is only 32% in rural areas. Even though electricity achievement is said to be adequate, there is daily power outage and it is often necessary to keep a private generator on hand.

For water supply the situation is more severe, as only 39% of the Yangon Region can receive pipe water supply. Even in the serviced area the water supply can be irregular, so most of the dwellings depend on the

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<sup>7</sup> Description here is due to the Master Plan for the Sustainable Urban Development of Greater Yangon (SUDP), Final Report in 2013.



pumping of well water. For sewerage treatment on the other hand, drainage ducts built under the British rule in the central urban area (CBD) are still functioning, but there is no sewer network in other new development areas. Sewerage penetration rate within the YCDC jurisdiction is very low at 5%, and the sewage disposal rate is estimated to be around 43% even when septic tanks are included.

2.2.4 Main Players of Housing Provision

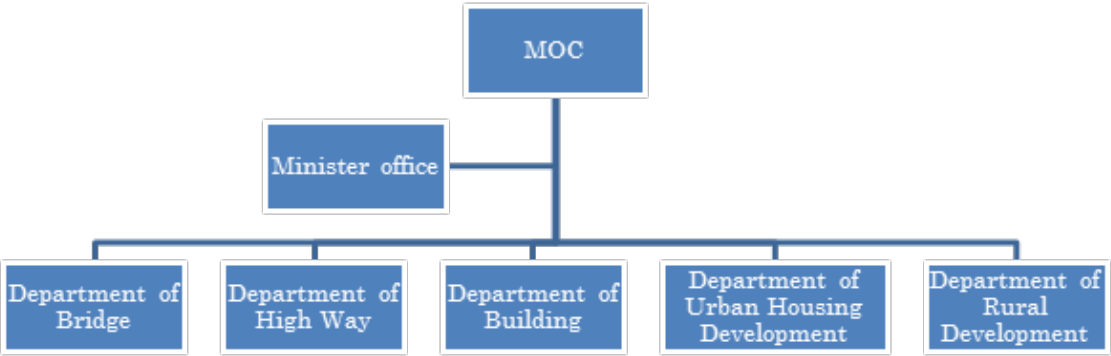
DUHD (Department of Urban and Housing Department, formerly DHSHD) located in the Ministry of Construction (MOC) is the main housing supply agency, making housing supply plans throughout the country and conducting construction in various places. Since its establishment in 1951, DUHD has a track record of building a total of 50,000 houses by 2015, about 80% of which are concentrated in the Yangon area. In parallel, City Development Committees (namely in Yangon, Mandalay and Nay Pyi Taw) have also supplied some housing units, although the numbers are fewer than that by DUHD.

The NLD administration has laid out a policy to greatly accelerate housing construction, and DUHD is also building a large-scale residential complex in the outskirts of Yangon. However, since it cannot deal with the influx urban population alone, the Government encourages the private sector, including foreign investors, to participate in housing supply. Investment in affordable housing is also clearly stated as a priority in the injection of foreign capital by MIC (Myanmar Investment Committee) launched in June 2017, and it is hoped that support measures by the current regime will be launched.

At present, the housing units built by foreign investors are those in upper part of the market, and are virtually limited to the affluent population and/or foreign nationals stationed in Myanmar. The Condominium Law was enacted in 2016, but the relevant regulations have not been effected, and the law may not be applied to housing units on public lands. Thus it is not clear yet whether the law would boost the supply of low cost or affordable housing units in Myanmar or not.

(1) Ministry of Construction (MOC)

Ministry of Construction is a ministry in the Union Government of Myanmar with five departments in charge of bridges, highways, architecture (mainly public architecture), urban and regional planning, and road network in the rural areas.



Source: Based on documents from MOC, copied by Consultant

Figure 2-1 Organization of MOC (Five departments and Ministers Office)

(2) DUHD.

Among the four departments, Department of Urban and Housing Development (DUHD) is in charge of public housing supply, mainly low-cost and affordable housing units. The following table shows historical numbers of supplied housing units by DUHD by types of housing units since 1951. This shows that DUHD supplied in all about 140,000 housing units, a quarter of which were low-cost housing units.

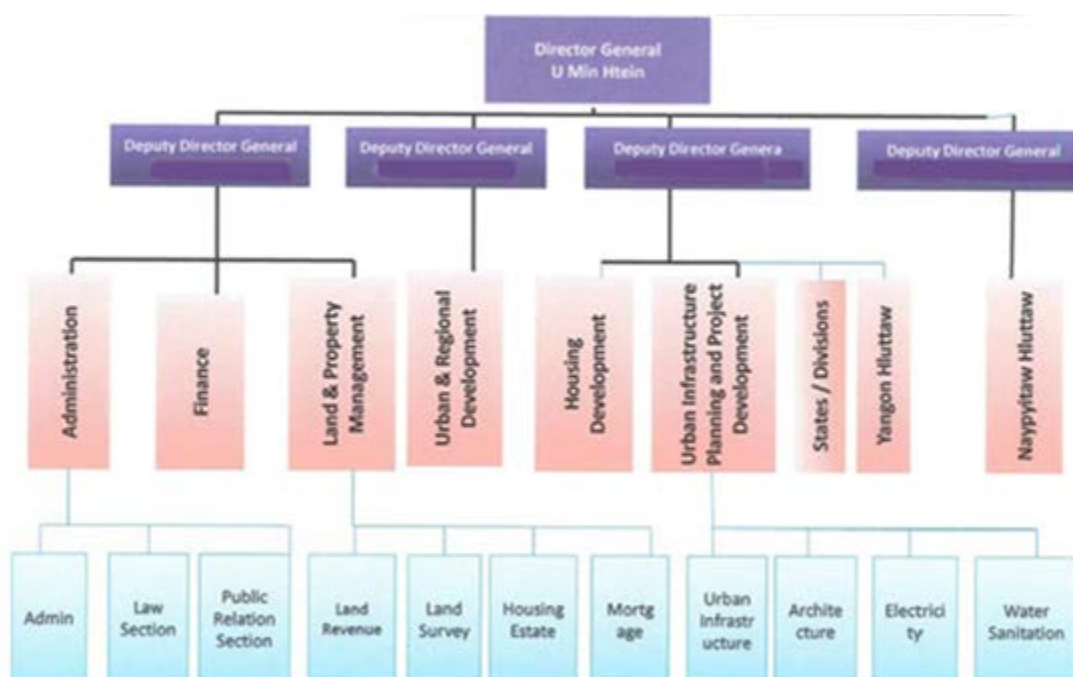
**Table 2-7 Housing Supply by DUHD**

No.	Period	Rent		Sold			Total	Remarks
		Rental Housing	Staff Housing	Low Cost	Middle Cost	High Cost		
1	Parliamentary Government (1951–1961)	6,601					6,601	
2	Socialist Government (1962–1988)	3,393	7,637				11,030	
3	Military Government (1989–2010)		73	3,448	45,655	2,473	51,649	
4	Democratic Government (2011–2015)		2,596 *	20,298	7,136	6,029	36,059	65,416
5	Parliamentary Government (2015–2016)	5,156 *	1,830 *	11,160	6,829	4,382	29,357	
Total		15,150	12,136	34,906	59,620	12,884	134,696	

\* Funded by Central Government and Buildt by Regional Government

Source: MOC

In DUHD there are six divisions and other organizations in charge of Nay Pyi Taw and Yangon Hluttaw and state and region offices. Among these, Urban and Regional Development Division is in charge of formulating master plan for housing, Housing Development Division in charge of procurement for housing supply, and Urban Infrastructure Planning and Project Development Division in charge of design of housing units and designing of urban infrastructure, water supply and power.



Source: Consultant, based on documents from MOC

**Figure 2-2 Organization of DUHD**

**(3) CDCs**

The Constitution of the Union of Myanmar defines the State/Region Governments as the local governments. Thus that there are seven state and even region governments, together with Nay Pyi Taw, which is a Union Territory comparable to State/Region. Each State/Region is then divided into Districts.

While the Constitution does not give specific definition for a city, there have been City Development Committees (CDCs) even before the Constitution, and there are three CDCs at present: Yangon, Mandalay and Nay Pyi Taw. In the case of Yangon, there is Yangon City Development Committee, or YCDC. The Chairman of YCDC is often called Mayor, and is normally assigned concurrently as Minister for Development of Yangon Region Government.

YCDC is reportedly launching a project to supply housing units in collaboration with some commercial banks to provide housing loans. The number of units is unknown precisely. On the other hand, YCDC functions as a regulator in DUHD's housing supply to provide construction permits.

**(4) Region Government**

Some of the major local governments such as Yangon Region Government have supplied rental housings and housings for public servants using the fund of the Union Government, as footnoted in Table 2-7.

Also, an organization of entrepreneurs and developers called MCEA is considering to launch a scheme to supply low-cost and affordable housing units in collaboration with YRG and CHDB. This kind of initiative may have a larger share of supply in future.

**(5) Private Sector**

Private sector has provided a number of housing units in Myanmar, particularly in Yangon Region, but most of them are high/middle cost housings, and their role in low cost and affordable housings is not significant.

## **2.3 Assistance of Donors in Housing Sector**

### **2.3.1 Japan**

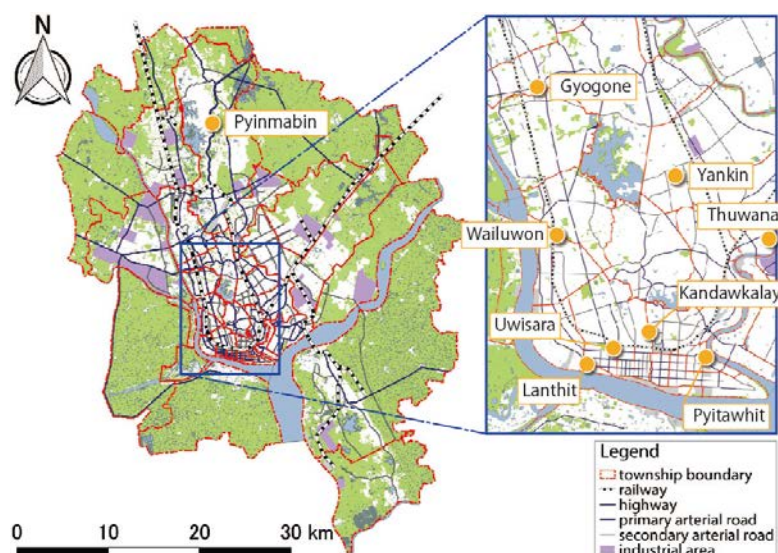
**(1) JBIC**

Japan Bank of International Cooperation (JBIC) established Myanmar Project Promoting Vehicle (PPV) in January 2015 with MoPF which is expected to play a role in urban development as well, and started its efforts for launching investment by Japanese firms, which including a study related to the Data Collection Survey on Urban Housing Development in Yangon to be mentioned hereafter.

## (2) JICA

Prior to this study, JICA carried out in 2017 in collaboration with UN HABITAT, “The Programme for Emergency Assistance to Poor and Vulnerable Community in Ethnic Minority Areas and Yangon,” in which collective housing units were provided in Yangon mainly for the low income households.

In 2016, JICA carried out “Data Collection Survey on Urban Housing Development in Yangon.” This study focused on 9 locations where MOC own state land and provided with proposals for urban redevelopment on these locations to create high quality urban space.



1.	Uwisara	4.	Pyitawthit	7.	Wailuwon
2.	Kandawkalay	5.	Yankin	8.	Gyogone
3.	Lanthit	6.	Thuwanna	9.	Pyinmapin

**Figure 2-3 Location of 9 Sites Owned by MOC**

In this study, two different schemes were proposed; 1) redevelopment of a single site where the existing low-rise housing units are redeveloped into a mixed development, and 2) redevelopment involving two sites, where on one site housing redevelopment is carried out to agglomerate the existing housing units over two sites, while on the other site commercial oriented redevelopment is pursued. The latter is called “chain-development scheme”.

## (3) MLIT, JHF

Since 2014, MLIT of Japan and MOC of Myanmar, and JHF and CHDB, have engaged in cooperative relationships. In October 2014, a study by MLIT was carried out (with AT Kearny as a consultant), and in October 2014, JHF started a series of training sessions on mortgage loans in April in Yangon and November in Tokyo.

In September 2016, a Letter of Intent (LoI) was signed by MLIT, MOC, JHF and CHDB, and in November 2017 and March 2017, training sessions on mortgage loans were carried out with MLIT as inviter of the trainees.

### 2.3.2 Other Donors

#### (1) Singapore

Singapore has been assisting with the housing sector of Myanmar since 2012 or so. In 2012 Goh Chok Tong, Former Prime Minister and the then Emeritus Senior Minister of Singapore, visited Myanmar with a high level delegation. The Myanmar side expressed an intention of receiving assistance from Singapore for the housing supply sector, and the Singapore side indicated that they were considering to do so<sup>8</sup>.

Since then Singapore has been active in the real estate sector of Myanmar, as Singaporean companies such as Surbana and Far Eastern Group has started to do business in Myanmar.

Surbana of Singapore involved in the housing development in Yadana Hninsi Residence in Dagon Seikkan, and a PC-method was proposed and adopted for the construction. A joint company was established by the Singapore and Myanmar sides to manufacture PC-beams, and the development project has been launched as a DUHD project. Also, seminars and/or workshops are carried out by Singapore a few times a year.

#### (2) Korea

Kookmin Bank of Korea concluded a MOU in 2014 on the cooperation of banking and IT systems development with CHDB. In March 2016 Workshop on Myanmar's Housing Finance was held in Seoul to which members from CBM, MOF, NPED, MOC and CHDB participated.

In February 2016, Kookmin Bank of Korea concluded a MOU with CHDB and MOC on the cooperation on the banking, microfinance and IT systems development.

In February 2017, there was a newspaper report about Two Step Loan financing housing projects in Shwe Pyi Thar, Dagon Seikkan and North Okkalapa<sup>9</sup>. The financing, according to MOC, is mainly for housing improvements up to MMK2.50 Million and thus does not cover the whole cost of a housing unit. This project is reportedly suspended in the bilateral discussions afterwards.

#### (3) ADB

ADB has carried out since 2012 Community-Led Approach to Improved Sanitation Systems (2012) in Yangon, and a scoping study for inclusive cities in 2014. In 2016, ADB held consultative meetings in Mandalay, Nay Pyi Taw and Yangon, and published a booklet "Making Myanmar's Cities More Inclusive". In its conclusion paragraph, it deals with Affordable Housing and Finance, in which a proposal was made to extend the loan term (from the present 3 years to a long period, for example 15 years). ADB has reportedly started a preparatory study on the housing finance already.

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8 Straight Times, on 14th June 2017. [https://www.mfa.gov.sg/content/mfa/media\\_centre/singapore\\_headlines/2012/201206/news\\_20120614.html](https://www.mfa.gov.sg/content/mfa/media_centre/singapore_headlines/2012/201206/news_20120614.html)

9 Myanmar Times, 20 Feb. 2017.

<http://www.mmmtimes.com/index.php/nationalnews/naypyitaw/25005chdbkoreanbanksignhousingmou.html>

#### (4) UN HABITAT

UN HABITAT in collaboration with partners, undertook a review and revision of the MNBC to encourage environmental sustainability and reduce risk through capacity building, promotion of better construction and better enforcement in 2012.

In April 2017, UN HABITAT held a seminar called International Experience Sharing Workshop on Slum Upgrading, participated by Minister of Construction and Chief Minister of YRG, among others<sup>10</sup>. YRG is reportedly interested in the participatory slum improvement project discussed in the seminar, though specific development afterwards have not yet been confirmed.

There is also information that UN Habitat is in preparation to launch housing loan for slum improvement with CHDB, but details have not been available.

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<sup>10</sup> <http://www.citiesalliance.org/node/6037>

## Chapter 3      **PRESENT CONDITION OF HOUSING SUPPLY BY THE PUBLIC SECTOR**

### 3.1   **Housing Supply Plan and Present Condition**

#### 3.1.1      **Projection of Urban Population in Myanmar**

A national census was carried out in August 2014, and the total population of Myanmar was estimated as 51.41 million. In the same year, 2014, The United Nation's prospects 2014 showed that the urban population in Myanmar was estimated at 18.02 million, and in 2030 the urban population was projected to reach 27.13 million. Accordingly, the urban population will increase 9.10 million by 2030, which corresponds to 2 million households based on a household size of 4.39 as prescribed in the Census. Thus the number of housing units in demand by 2030 will be minimum 2 million, in addition to any existing shortage as well as old and decrepit housing stocks that may have to be replaced.

The above number of housing units in need due to increasing population will be the mostly in Yangon, estimated at 590,000 by 2030, followed by Mandalay and Nay Pyi Taw, with numbers proportionate to their urban population size. Therefore, it is important to provide housing units in Yangon at first and extend supply to other major to middle sized cities.

**Table 3-1 Present and Future Urban Population of Major Cities in Myanmar**

Name of Urban Center	Urban Population ( 1000)		Necessary    Housing Units( 1000)	Remarks
	2014	2030		
Yangon	5,746	8,351	593	JICA (SUDP - The Strategic Urban Development Plan of the Greater Yangon)
Mandalay	1,319	1,920	137	JICA(Urban Development Plan for Mandalay 2040)
Nay Pyi Taw	333	502	38	2014 Census; and 2030 population estimated by using urban population growth rate of UN Urbanization prospect estimate.
Other Urban Centers	10,625	16,387	1,313	
Total Urban Population	18,023	27,160	2,081	Urbanization prospect 2014

#### 3.1.2      **Housing Plan of Myanmar Government**

The Government of the Union of Myanmar publicized a housing plan focusing on supplying one million units by 2030 nationwide. This corresponds to half of the housing supply needs mentioned above. In response to the one million housing plan, DUHD formulated a 5-year housing supply plan. DUHD plans to supply 20% of the total, of which 90% is low-cost housing and 10% is affordable housing. According to this plan, DUHD will supply 7,200 units per year, of which 90%, or 6,480 unit will be low-cost, and 10%, or

720 units affordable.

One Million Housing Plan for 20 Years		
■ The First Five year Plan(2011-2015)	0.10 million	
■ The Second Five year Plan(2016-2020)	0.18 million	
■ The Third Five year Plan(2021-2025)	0.30 million	
■ The Forth Five year Plan(2026-2030)	0.42 million	
<b>20 years total</b>	<b>1.00 million</b>	
□ DUHD plan is to produce 20% of total targeted units and among these 20% , 90% is for low income people and 10% for lower middle income people.		

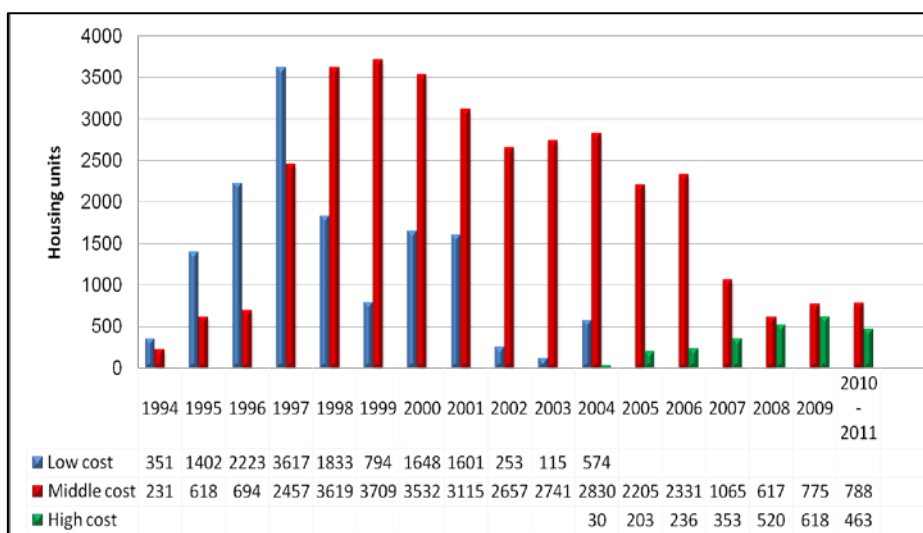
**Figure3-1 One Million Housing Plan for 20 Years**

In order for DUHD to provide low-cost housing at a low price, there are a few conditions. They include, 1) in most cases the land on which the housing units are built have been public land, and kept so after the sales, 2) DUHD, as a government organization, does not make a profit, and 3) DUHD has a separate government budget for infrastructure (road, water supply etc.), the cost of which is not to be added to the sales price. According to a hearing with DUHD, the cost of infrastructure in 3) amounts to approximately 30% of the sales price of low-cost housing units. Therefore, the supply of low-cost housing cannot be done easily by the private sector such as DUHD.

#### (1) Supply by MOC

As depicted in the figure below which shows the supply of housing units from 1990s through to 2010s, DUHD supplied more than 1,000 units per year from 1995 to 2007. In particular, between 1997 and 2001, it supplied more than 5,000 units per year. Looking at numbers by types, low-cost units were the majority up to 1997, but from 1998 middle cost units took over the majority and became the mainstream of supply. Since 2008, the annual supply declined and the number fell below 1,000 units per year.

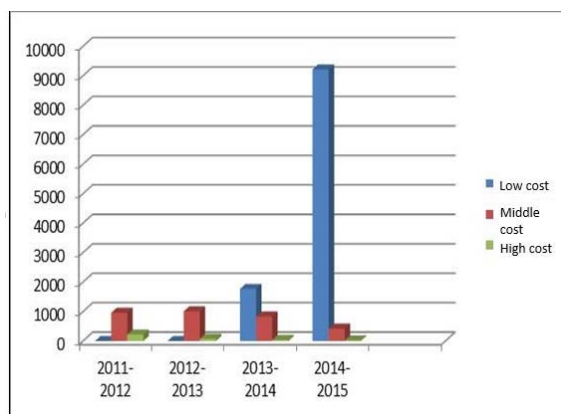




Source: DUHD

**Figure 3-2 Historical Trend in Housing Supply by MOC (1994-2010)**

Since 2012 the democratization proceeded at a high pace, and in November 2014, the Government established a revolving fund to cater to the construction of low-cost housing units. This fund was expected to bridge the 2 to 3 year period between the commencement of housing unit construction to the completion of the sales, thus the fund would revolve (turn in, turn out) in a short period of time. The Government released MMK 100 Billion to the Revolving Fund. Accordingly, the number of housing units supplied increased to 9,000 per year, most of which was low-cost housing units. Assuming one unit of low-cost housing costs around MMK10 million per unit, the Revolving Fund at its maximum is capable of providing around 10,000 units of low-cost housing units.



Source: DUHD

**Figure 3-3 Historical Trend in Housing Supply by MOC (2011-2014)**

DUHD indicated that there are three sources for housing supply; 1) government budget, 2) the Revolving Fund and 3) loan from CHDB. Of these, 1) government budget is about MMK 60 Billion (though it decreased in half in FY2016/17) , 2) the Revolving Fund has MMK 100 Billion (November 2014) and 3) loan from CHDB amounting to MMK 82 Billion. Assuming that the Revolving fund replenish in 3 years, the annual dispensable amount comes to MMK30 billion or so.



Source: DUHD

**Figure 3-4 DUHD Source of Housing Finance**

## (2) Concern on Funding Shortage for Supply

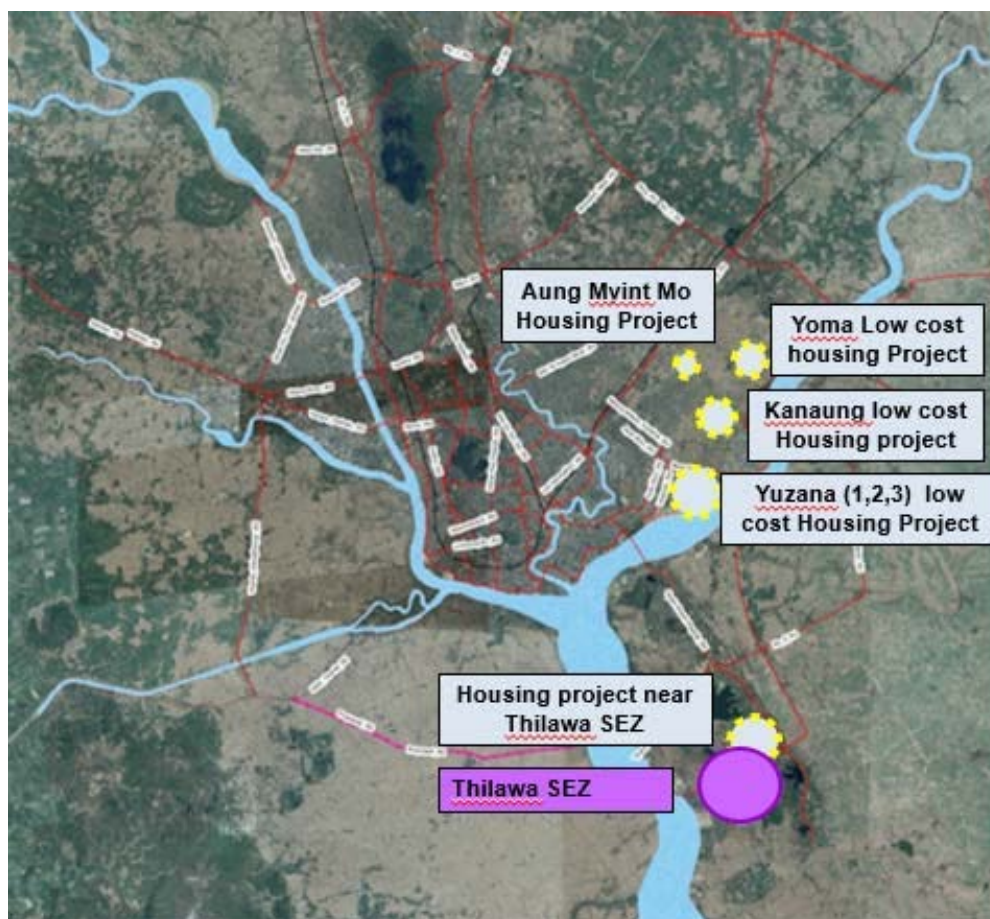
Since the present condition of the Revolving Fund established in 2014, particularly the replenishment from the sales of housing units, is not clearly analyzed, it is difficult to assess the capacity of the Revolving Fund to finance future housing supply precisely. One of the reasons for the shortage of the available fund in Revolving fund may be said to be in low sales of housing units due partly to the lack of housing finance. In order not to reduce the supply of low-cost and affordable housings in 2018 and onwards, improvement of the housing finance system is expected, so that the replenishment to the Revolving Fund would be improved.

## (3) Two-Year Housing Supply Program of MOC

### 1) Yangon

DUHD is implementing a Two Year Housing Supply Program 2016-2018. This program has a total planning supply of 10,798 low-cost housing units, 57 of which are already sold, meaning that more than 10,000 units are still available for sales. There are also 1,820 affordable housing units, of which none has been sold yet.

The following figure shows the locations where low-cost housing projects are implemented. Yuzana, Kanaung and Yoma are in the eastern part of Yangon near the Bago River, while Aung Myint Mo is in an inland location. Thilawa Low Cost Housing Project is in the vicinity of Thilawa SEZ..



Source: DUHD

**Figure 3-5 Location of Major Low Cost Housing Projects in Yangon**

All the low-cost and affordable housing units mentioned above, according to DUHD, have obtained building permits from YCDC. The estimated completion time will be mid 2018 or earlier.

**Table 3-2 Low Cost Housing Units under 2-year Program**

(As of Feb. 2018)

Township	Housing Project	Project Area (acre)	Unit size (square feet)	Sold/Transferred Units	Total Units	Status	YCDC Permission	Completion Date
Dagon Seikkan	Yuzana Low Cost Phase 1	15.8	468 - 522	284	864	Finished	Yes	Finished
Dagon Seikkan	Yuzana Low Cost Phase 2	27	468 - 522	487	1,152	Nearly finished	Yes	Nearly finished
Dagon Seikkan	Kanaung Housing	10	468 - 522	154	852	Finished	Yes	Finished
Dagon Seikkan	Yoma Low Cost	30.2	324 - 468	0	1,920	60% finished	Yes	Dec 2017
Dagon Seikkan	Yuzana Low Cost Ph. 3	26	436 - 522	0	1,456	Starting	Yes	Dec. 2019
Hlaing Tharyar	Kyan Sit Min Low Cost Ph. 1	50	324 - 522	0	1,904	77% finished	Yes	Dec. 2018
Than Lyin	Thilawar	30	384 - 400	0	1,480	30% finished	Yes	Dec. 2018 & Dec. 2019
Dagon (south)	Aung Myin Mo Low Cost Ph.1	14.3	484 - 522	0	960	Nearly Finished	Yes	Nearly Finished
Hlaing Thar Yar	Shwelinpan Ph. 2	9.5	484 - 522	420	496	Finished	Yes	Finished
Hlaing Thar Yar	Shwelinpan Ph. 3	7.4	468	150	504	Finished	Yes	Finished
	Total			1,495	11,588			

Source: Original data from DUHD amended by JST

**Table 3-3 Affordable Housing Units under 2-year Program**

(As of Feb. 2018)

Township	Housing Project	Project Area (acre)	Unit size (square feet)	Sold/Transferred Units	Total Units	Status	YCDC Permission	Completion Date
Than Lying	Thilawar	30	650	0	240	30% finished	Yes	Dec. 2018 & Dec. 2019
Dagon (South)	Aung Myint Mo	14.3	960 - 1100	0	96	Nearly finished	Yes	Nearly finished
Hlaing Tharyar	Shwe Lin Ban IZ Commercial Area	1	800	0	64	54% finished	Yes	Dec. 2018
Shwe Pyi Thar	Shwe Pyi Thar IZ (3) Commercial Area	5	650 - 1500	0	112	Nearly finished	Yes	Nearly finished
Hlaing Tharyar	Kyan Sit Min (1)	52	650	0	588	77% finished	Yes	Dec. 2018
Hlaing Tharyar	Kyan Sit Min (2)	27	800 - 1500	0	664	22% finished	Yes	Dec. 2018
Dagon (South)	Aung Myint Mo	14.3	960 - 1100	0	96	Nearly finish	Yes	Nearly finish
Tar Kay Ta	Water Front Villa (2)	0.387	927	0	18	Finished	Yes	Finished
Dagon (South)	Inwa Housing	1	1175	0	32	60% finished	Yes	Dec. 2018
Dagon Seikkan	Yadana Hnnsi Residence	About 21	480/600/1080/1200	512	1,780	Finished	No	Finished
	Total			512	3,594			

Source: Original data from DUHD amended by JST

Note \*: This entry is to be considered further.

Through DUHD's original assessment is "Yes", JST gathered information contrary to this.

The JICA Study Team visited some of these housing stocks on site, and confirmed the conditions.

In addition to these, there are other housing units provided by MOC, as listed in the following table.

**Table 3-4 Low Cost Housing Units outside of 2-year Program**

(As of Feb. 2018)

Township	Housing Project	Project Area (acre)	Unit size (square feet)	Sold/Transferred Units	Total Units	Status	YCDC Permission	Completion Date
Mingaladon	Pyin Ma Bin	14	400		800			

Source: Original data from DUHD amended by JST

**Table 3-5 Affordable Housing Units outside of 2-year Program**

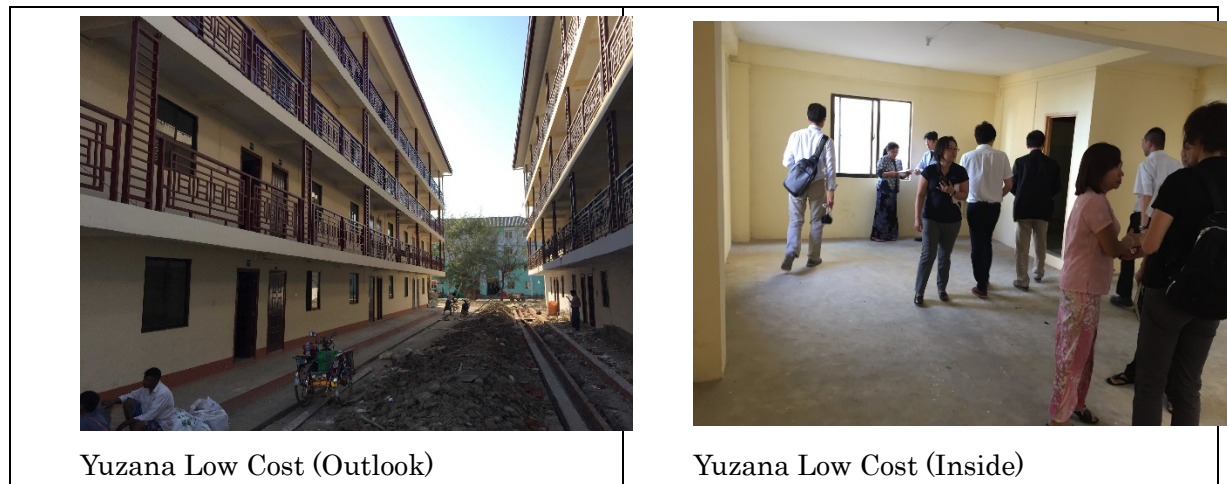
(As of Feb. 2018)

Township	Housing Project	Project Area (acre)	Unit size (square feet)	Sold/Transferred Units	Total Units	Status	YCDC Permission	Completion Date
Than Lyin	Aung Chan Thar Extension	120	400/800/940	0	4308			

Source: Original data from DUHD amended by JST

In the table, Yadana Hninsi Residence was high-rise apartment buildings developed by DUHD, and the design was done by Surbana of Singapore, and the sale price is said to be in the range of MMK60 to 120 Million, which is beyond the price range of low-cost housing of this Study. This project did not obtain building permit from YCDC.

The following shows the present conditions of the housing stocks mentioned here.





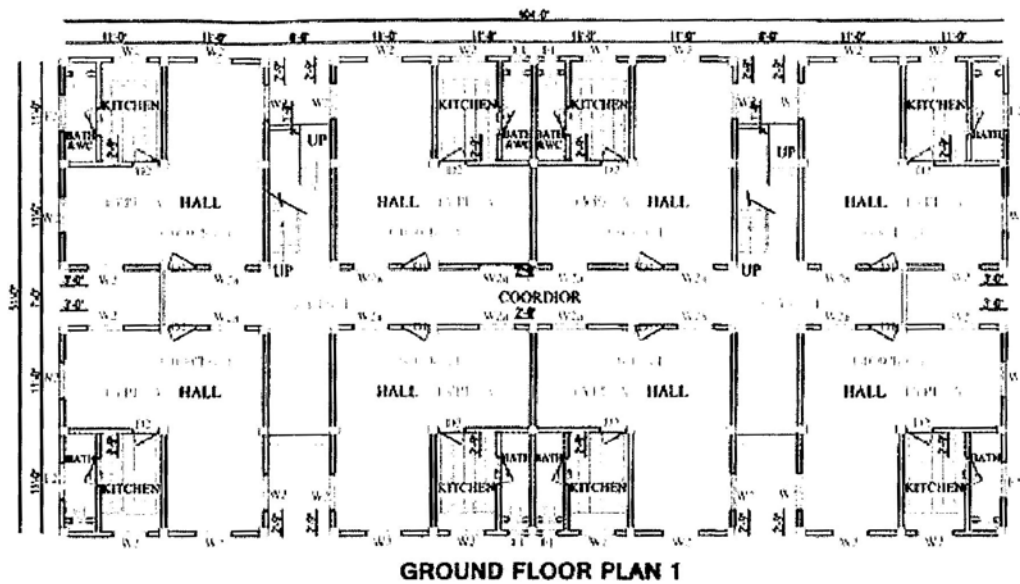


Thilawar Low Cost (Construction)

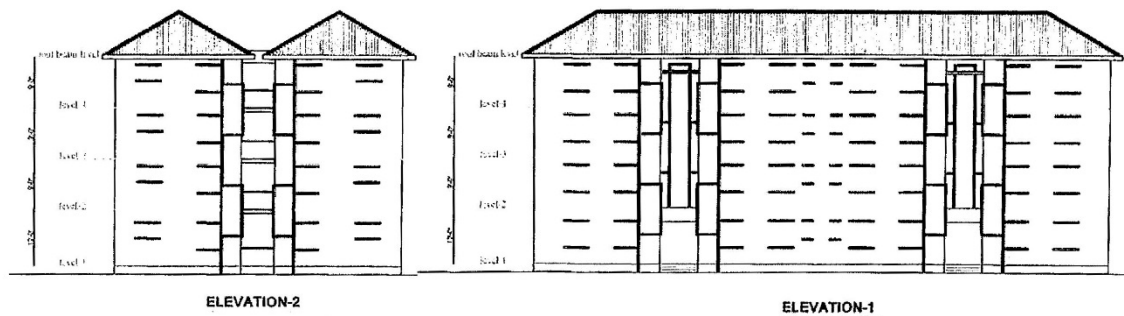


Yudana Hninsi

**Figure 3-6 Housing Units by DUHD in Yangon**



Kanaung Low Cost Housing – Plan



Kanaung Low Cost Housing – Plan

**Figure 3-7 Housing Units Plan and Elevation by DUHD**

## 2) Mandalay

Mandalay is the second largest city in Myanmar with a population of more than 1 million, and CHDB has already started a housing loan program there. It is advisable to include Mandalay as part of the housing finance program. On the other hand, the building permit scheme in Mandalay is considered to be less comprehensive than that of Yangon, and this aspect needs more examination in the upcoming phase. Also, as Mandalay is more vulnerable to seismic risk, so building's structural safety would need to be examined in greater depth.

**Table 3-6 Low Cost Housing Units outside of 2-year Program in Mandalay**

Township	Housing Project	Project Area (acre)	Unit size (square feet)	Sold/Transferred Units	Total Units	Status	MCDC Permission	Completion Date
Chan Mya Thar Zi	Mya Yee Nanda Ph.1	10.59	650		432	Finishing	Yes	March 2017
Chan Mya Thar Zi	Mya Yee Nanda Ph.2		567		800	Finishing	Yes	March 2017

Source: Original data from DUHD amended by JST



**Figure 3-8 Mya Yee Nanda Low Cost Housing by DUHD and MCDC**

According to a hearing with MCDC, as Mandalay has less public lands available for housing development than Yangon, supply of housing units by MOC is not great in number. Thus the low-cost housing is in supply deficit, and it may be a little difficult to presume that the demand for housing finance will have a good effect.

## 3) Nay Pyi Taw

In Nay Pyi Taw, there is a low-cost housing project called Shwe Nathar, with one building in RC construction completed and another in steel construction near completion. There is a plan to build 400 more units on the same project site, but the implementation of the plan is yet to be decided. The cost of housing is said to be MMK11 Million, excluding the cost for infrastructure. This site is in the Sagaing Fault region, and DUHD said that a higher seismic parameter was employed here (i.e.  $Z=0.4$  as compared to 0.15 or 0.2 in Yangon).

**Table 3-7 Low Cost Housing Units outside of 2-year Program in Nay Pyi Taw**

As of Dec. 2017

Township	Housing Project	Project Area (acre)	Unit size (square feet)	Sold/Transferred Units	Total Units	Status	CDC Permission	Completion Date
Ottra Township Nay Pyi Taw	Shewe Nathar Pilot	About 8	400	Sale in progress	80		Yes	June 2017
Ottra Township Nay Pyi Taw	Shewe Nathar Future Plan		400, 650, 950		396			To be Decided



**Figure 3-9 Housing Units by DUHD in Nay Pyi Taw**

#### (4) Sales Price

In many of the DUHD documents, low-cost housing units was said to be price around MMK10 Million, but some of the latest documents indicate the price in Yangon to be USD11,000 to 12,500 for units in the Shwe Lin Bann Housing Project, which corresponds to MMK 15 million per unit.

On the same token, an average price of affordable housing units was said to be MMK30 Million, but the



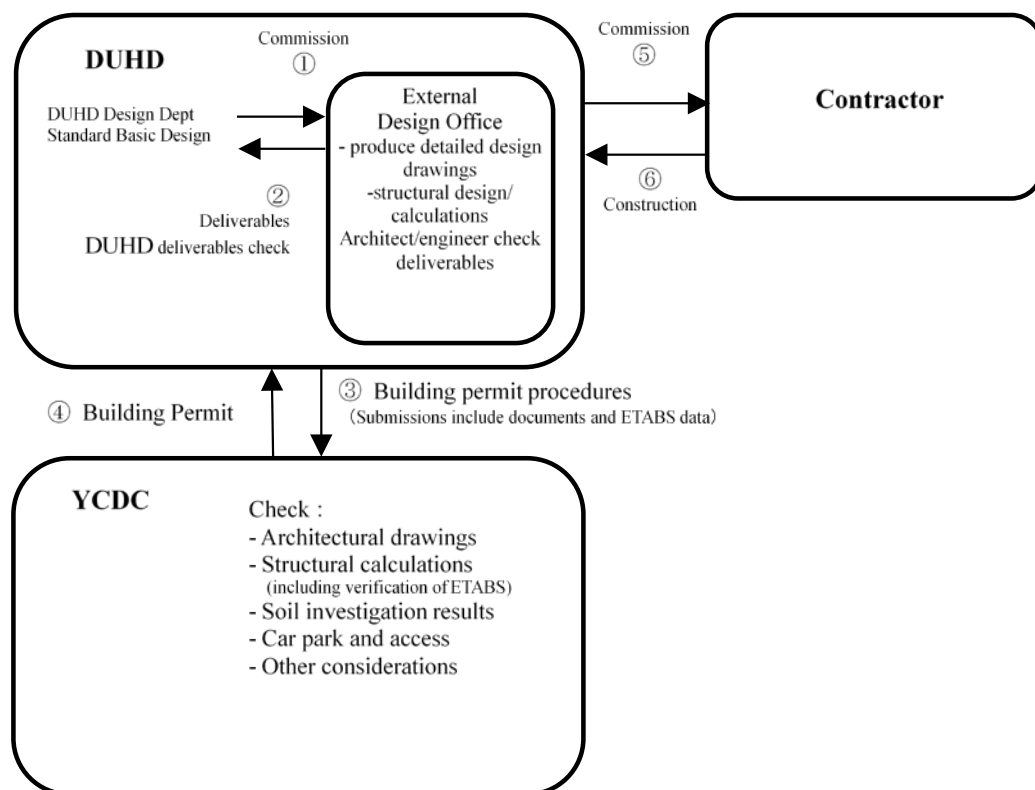
latest documents indicate a price of MMK38 Million per unit

## **3.2 Current Status of Housing Design/Building Permit**

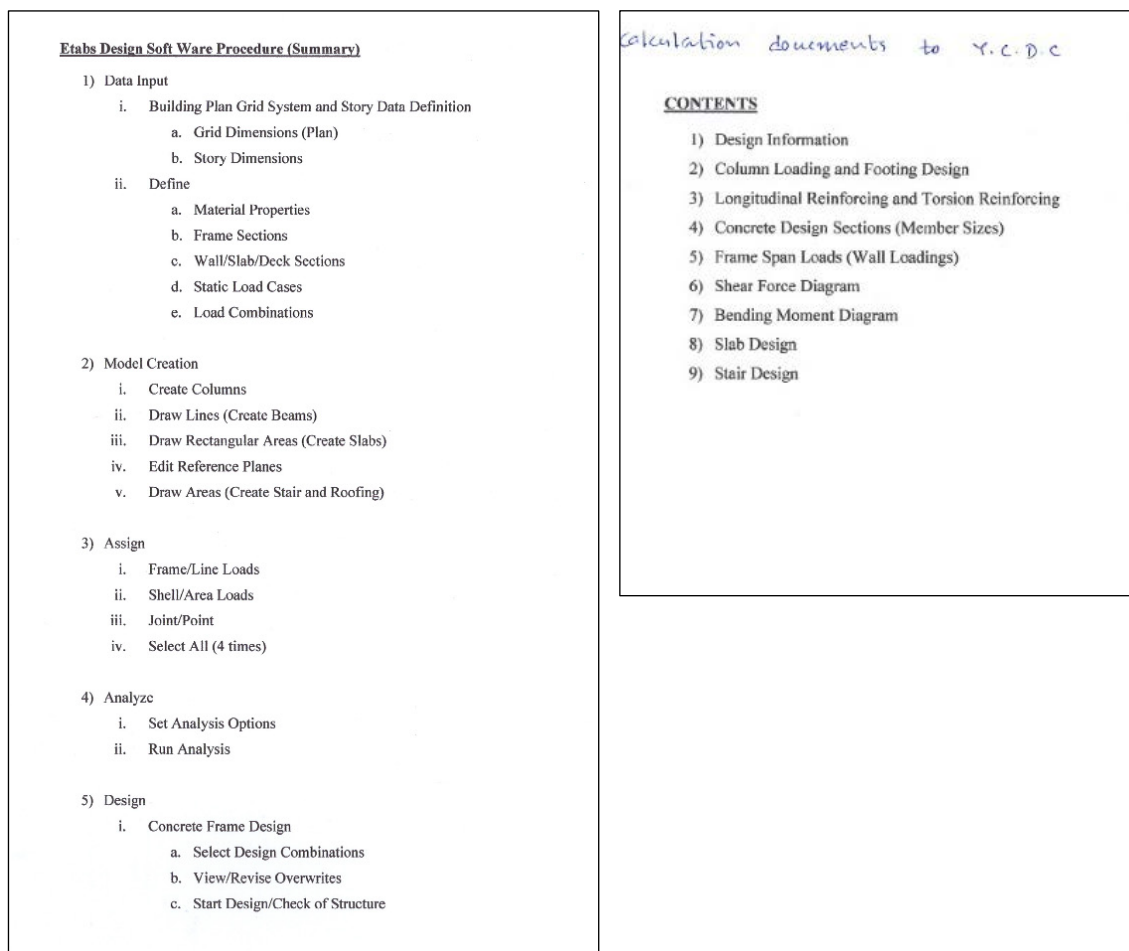
### **3.2.1 DUHD Design Status**

#### **(1) Standard Housing Designs by DUHD**

Standard designs are used for low cost and affording housing. After the handover of power, YCDC building permit procedures were carried out and approvals from YCDC were carried out for all low cost housings. For the standard designs, the basic designs were made within DUHD, and external design offices are commissioned to produce detailed drawings, including drawings necessary for building permit such as architectural drawings, structural drawings, and structural calculations. The commissioned design office knows thoroughly about the submission requirements for building permit application, and their internal senior architect or senior engineer accredited by MAC or MEC conduct checking of the deliverables before submission. After commission, detailed drawings are made in accordance to MNBC2012, UBC1997, or ACI381 design standards, as well as YCDC requirements or guidelines. Structural analysis soft wares compatible to YBC1997 or ASIC 7 such as ETABS, STAAT PRO, and TRAKLAR are used to verify loading calculations, the soft data of such structural calculations also form part of the submissions. However, as described in 2.1.3(2) above, DUHD housings which are less than 8 stories in height in Yangon are not designed as earthquake resistant structures, although the housings in Mandalay are designed as earthquake resistant (see below).



**Figure 3-10 Design, Permit, and Construction of DUHD Standard Design**



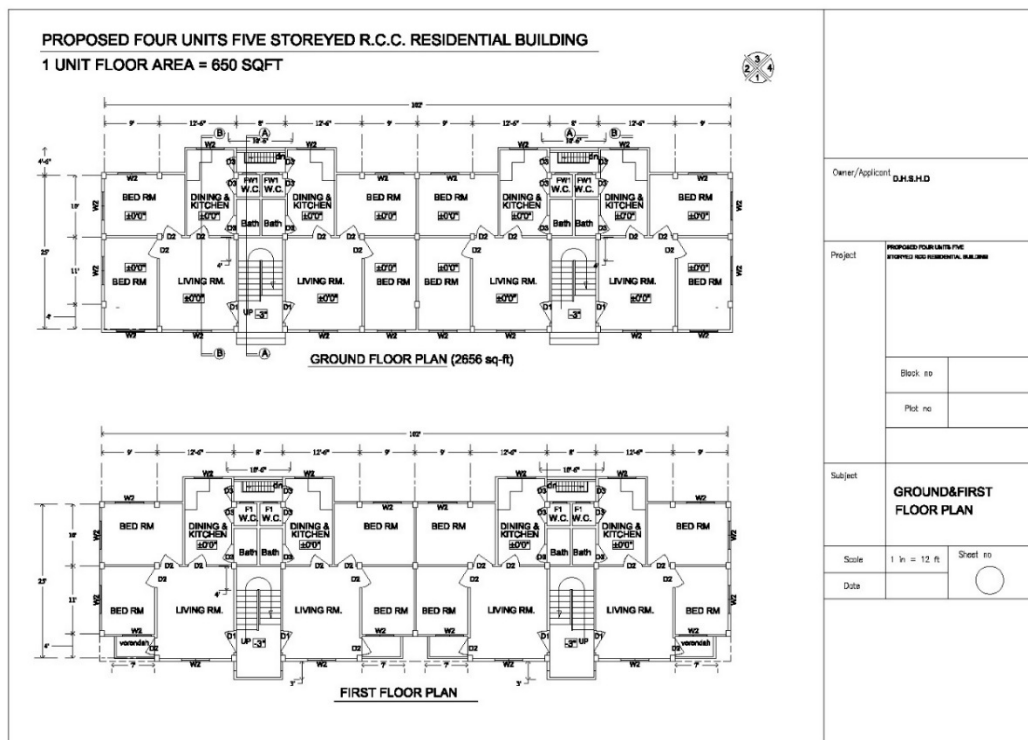
source: YCDC

**Figure 3-11 Contents of Submission Regarding Low Cost and Affordable Housing Standard**

## Design

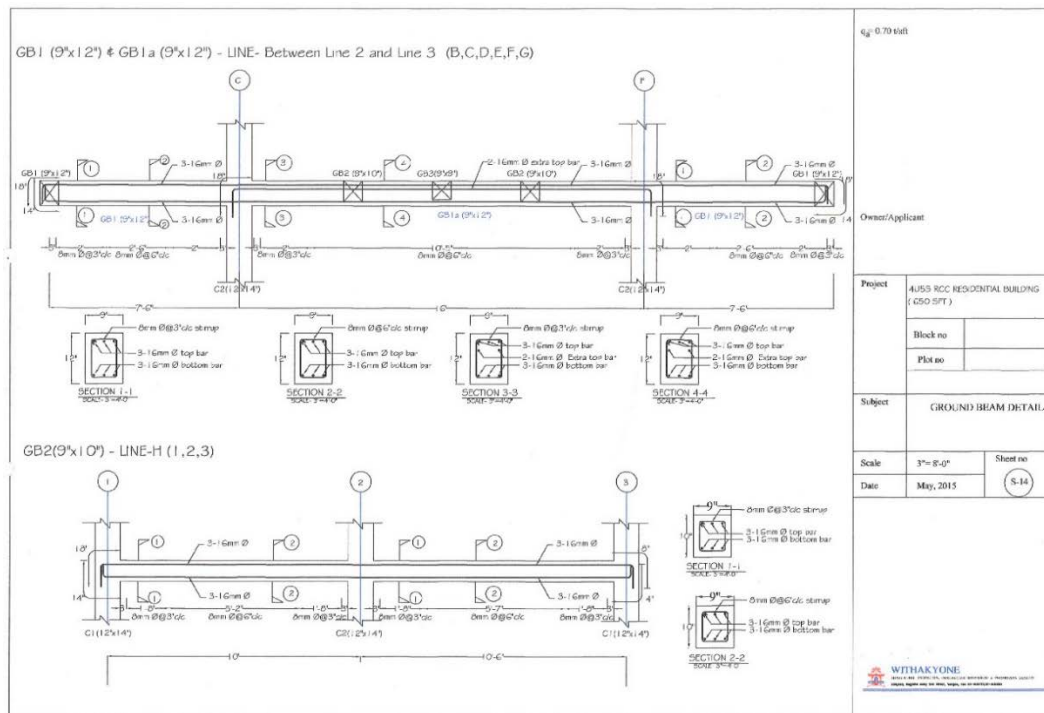
When delivering the deliverables to DUHD, the senior architect and senior engineer in the commissioned design office check the quality of the deliverables, and make submission to DUHD after checking. After submitting the deliverables, DUHD conduct internal checking again to verify whether design requirements or building standards are met.

Geotechnical investigation is carried out by the instruction of YCDC at the design stage of each low cost and affordable housing, and the soil classification/condition is verified. Foundation soil requirements are classified based on MNBC or UBC design standards, based on which design requirements for foundation design are formulated



Source: DUHD

**Figure 3-12 Architectural Drawings of DUHD Mya Yee Nandar Low Cost Housing Design**



Source : DUHD

**Figure 3-13 Structural Drawings of DUHD Mya Yee Nandar Low Cost Housing Design**

In principle, DUHD is responsible for the design and construction of all low cost or affordable standard housing. However, in the case of the abovementioned Mya Yee Nandar Low Cost Housings in Mandalay (3.1.2), DUHD cooperated with MCDC. The construction works were divided into two sections and shared between DUHD and MCDC, each carrying out their own standard architectural and structural design for their section. As Mandalay lies on a major seismic fault line with high earthquake hazard, DUHD carries out geotechnical investigation (soil test) prior to the design stage. DUHD also alleges that in the case of Mandalay, structural design for earthquake resistant design based on foundation condition is carried out, and that structural calculations are conducted on ETABS software and checked by MEC accredited senior engineer. However, verification of ETABS data received from DUHD by the research team has not been able to fully confirm that claim.

Nevertheless, in regards to the DUHD standard design, it is carried out not by Mandalay DUHD but by Nay Pyi Taw DUHD headquarters, and similar to the case of Yangon the design is outsourced to an external architectural firm. While the exterior and internal layout of the common standard housings are adopted, the structure itself, such as the sizes of the columns/beams/foundation or steel reinforcement, is adjusted based on the results of structural calculations (ETABS) with considerations to the Mandalay regional and local site ground conditions, which are then issued as part of the contract documentation and construction drawings.

## (2) Cost Implication in Making Standard Housing Design Earthquake Resistant

One of the deterrents in promoting and popularizing earthquake resistant structures is cost. In terms of cost for making buildings earthquake resistant, a local experienced structural engineer has indicated that the overall construction cost is increased by 10% for 6-story buildings and 30% for 8-story buildings, due to increase in steel bar diameter and number, as well as increase in concrete volume. As a result, building owners are reluctant to propose earthquake resistant buildings unless they are obliged to do so in the building approval process.

In a separate study, cost simulation has been carried out for modifying two DUHD standard housing design models into earthquake resistant structures, and comparison is made for construction in Yangon, Nay Pyi Taw, and Mandalay. The two housing models used in simulation are 6u5s (6 units per story, 5 stories high) and 8u5s (8 units per story, 5 stories high). The two methods of modification are 1) insertion of earthquake resisting shear walls and 2) upsizing and strengthening of structural members. The results of the cost simulation and comparison are summarized as follow <sup>11</sup>

**Table 3-8 Cost Comparison of Two DUHD Standard Housing Models**

	6u5s		8u5s	
	Method 1 Insertion of shear walls	Method 2 Upsize/Strengthen members	Method 1 Insertion of shear walls	Method 2 Upsize/Strengthen members
Yangon	+ 8.29%	+ 8.55%	+ 6.63%	+ 3.25%
Naypyidaw	+ 12.98%	+ 12.78%	+ 11.46%	+ 6.53%
Mandalay	+ 19.68%	+ 15.29%	+ 19.95%	+ 9.65%

**“+” indicates cost increase compared to original non-improved housing design models**

Source: Materials by Irie Miyake Architects and Engineers, compiled by JICA Research Team

In conclusion, the simulation and comparison shows that for two 5-stories high standard housing designs, improving earthquake resistance for structure may lead to an increase 5% - 10% for Yangon, 10% - 15% for Nay Pyi Taw, and 10 – 20% for Mandalay.

Despite the costs mentioned above, it is considered necessary to propose the inclusion of earthquake

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<sup>11</sup> “Myanmar Low Cost Housing Structural Design Conditions Verification Study” by Irie Miyake Architects and Engineers, 26 September 2017.

loading and wind loading even for buildings under 8 stories in the future, especially for buildings eligible for loan financing to be built in the future and including those buildings in other regions such as Mandalay. Instead of proposing the desired scenario for Myanmar using Japanese precedents, it is necessary to make proposal based on sufficiently justifying necessity by verifying the current status in Myanmar and opinions from local designers and structural analysis experts, as well as taking into consideration the approval and human capacity of the approval authorities (eg, not only HIC but YCDC overall, MCDC, or other regional authorities).

### 3.2.2 Myanmar Architect Council, Myanmar Engineer Council

#### (1) Myanmar Architect Council

Myanmar Architect Council's aim is to develop the standard of knowledge and skills of the local architects, maintain the professional ethics of architects and architectural related professionals, and ensure the qualification and accreditation systems in the country. It consists of a total of 29 members, with 4 members responsible for architecture from MOC, 3 architects from universities and academia, 1 architect from Nay Pyi Taw City Development Committee, 18 architects chosen from MAC, and 3 veteran architects.

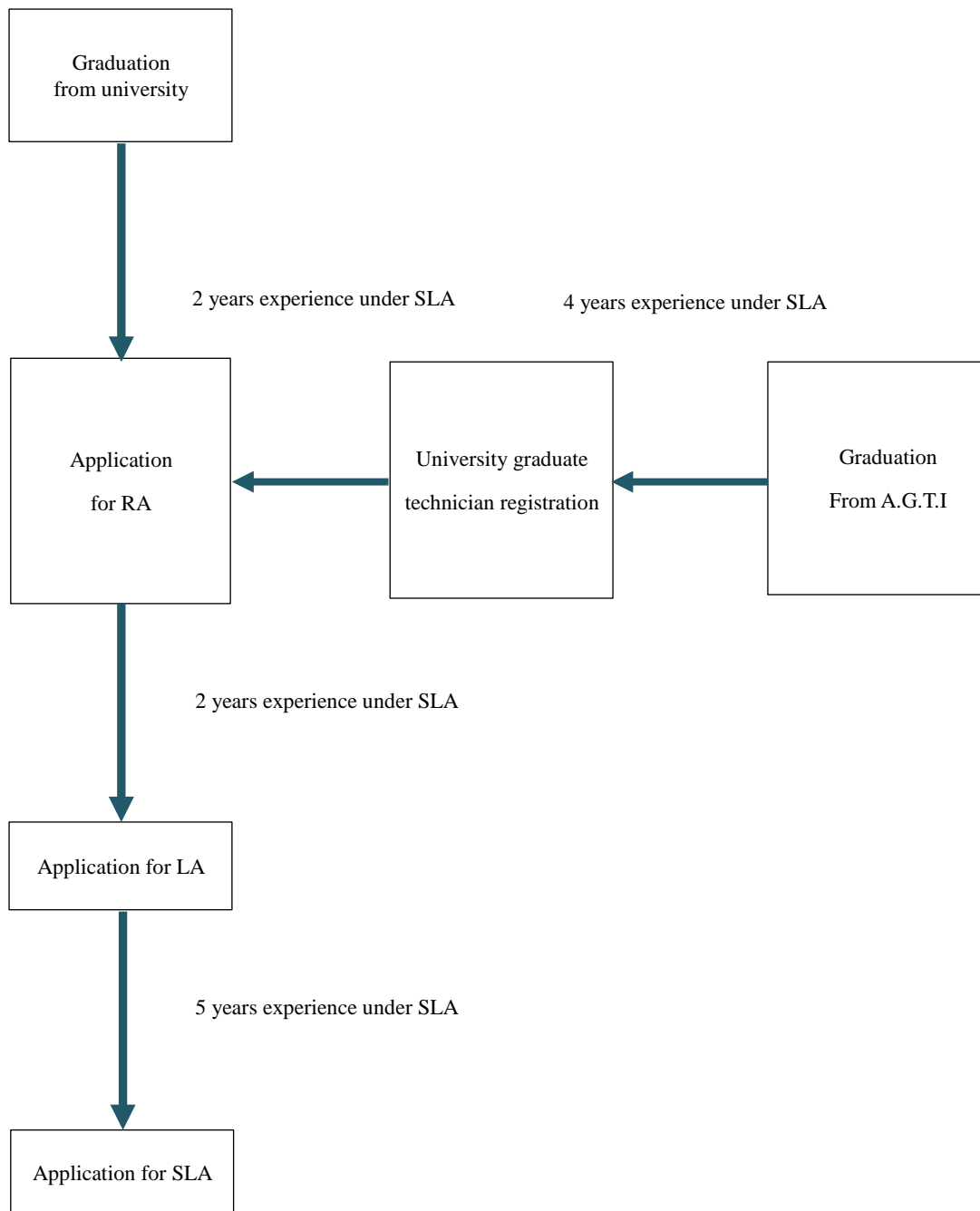
**Table 3-9 Number of Accredited Architects and Engineers**

	Accreditation Organization	Registered Architect (RA) Registered engineer (RE)	Licensed Architect (LA)	Senior Licensed Architect (SLA) Registered Senior Engineer (RSE)	ASEAN Architect (AA)	Professional Engineer (PE)
Engineer	Myanmar Engineer Council	4269 (as of 13 Jul 2017)	N/A	1927 (as of 13 Jul 2017)	N/A	665 (as of 13 Jul 2017)
Architect	Myanmar Architect Council	790 (as of 26 Dec 2016)	273 (as of 26 Dec 2016)	184 (as of 9 Jan 2017)	12	N/A

Source : Materials from MAC and MEC, compiled by JICA Research Team

	Accreditation Organization	Registered Architect (RA) Registered engineer (RE)	Licensed Architect (LA)	Senior Licensed Architect (SLA)	ASEAN Architect (AA)	Professional Engineer (PE)
Engineer	Myanmar Engineer Council	4269 (as of 13 Jul 2017)	N/A	1927 (as of 13 Jul 2017)	N/A	665 (as of 13 Jul 2017)
Architect	Myanmar Architect Council	790 (as of 26 Dec 2016)	273 (as of 26 Dec 2016)	184 (as of 9 Jan 2017)	12	N/A

Source : Materials from MAC, compiled by JICA Research Team



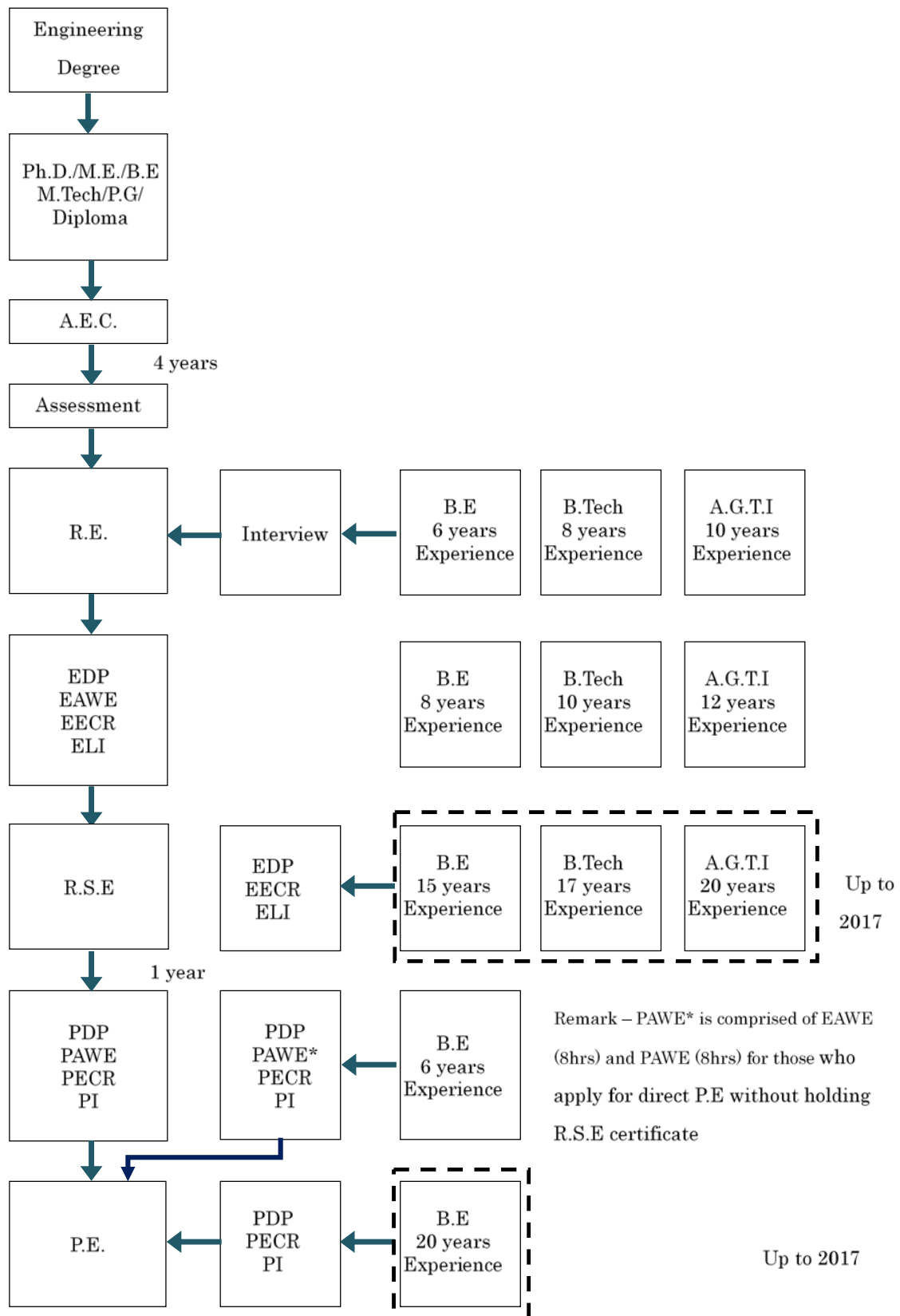
Source: Materials from MAC, compiled by JICA Research Team

**Figure 3-14 Professional Qualification and Accreditation for Architects in Myanmar**

## (2) Myanmar Engineering Council

Established in October 2014, Myanmar Engineering Council is a professional body governing engineers in Myanmar. Its aim is to uphold and upgrade the ethics and standard of engineers, and provide guidance and supervision in regards to engineering and technology. It sets up requirements for academic and professional qualification and accreditation, as well as RE, RSE, PE license program. (see Table 3-9).





Source: MEC

Figure 3-15 Professional Qualification/Accreditation for Engineers in Myanmar

### 3.2.3 YCDC Building Permit Status

#### (1) The Actual Status of Building Permit

Building Permit procedures are carried out through YCDC by the following authorities in accordance to the number of stories. In particular, YCDC By-law on Building and Construction (No.9/1999) stipulates the application and issuance of building permits, based on which YCDC implements building permit.

**Table 3-10 Relationship between Building Height and Application Authority**

Building stories	Approval Authority
4 – 8.5	YCDC
9 – 12.5	HIC
Over 13 stories	CQHP

Source: JICA Research Team

Housings supplied by DHUD are generally 4 – 6 stories high, thus building permit procedures are carried out by neither HIC nor CQHP but by YCDC.

After the handover of power, YCDC building permit procedures are carried out for all low cost housings, and approvals from YCDC are obtained. Architectural and structural checking by HIC is carried out in accordance to guidelines released by CQHP (Committee for Quality Control of High-Rise Building Construction Project). However, while CQHP guidelines for “Architecture” have been made public, the “Structure” guidelines are currently under drafting and not yet made public.

Before building permit by each approval authority, applications need to be made to Myanmar Fire Services Department (MFSD) and for the use of electricity, water and sewerage, and road access, and YCDC will release “Provisional Permit” when applications are accepted. In general, for building permit of buildings over 4 stories, architectural and structural drawings (certified by registered architects and engineers), car park layout, soil investigation, structural calculations, LS (licensed surveyor) , SEC (structural engineer certified) , LC (licensed contractor) and land owners signatory are required. For building permit of buildings over 9 stories, MEP drawings also need to be submitted.

The main urban planning and architectural considerations are as follow. Urban planning and architectural considerations are common to YCDC, HIC, and CQHP.

**Table 3-11 Considerations to Urban Planning and Architecture**

<b>Category</b>	<b>To be checked</b>	<b>Data Required</b>
Urban Planning	1. Compliance to Current Landuse Zoning	<ul style="list-style-type: none"> <li>- Project Location</li> <li>- Building Use Description</li> <li>- Floor Area Ratio</li> <li>- Building Coverage Ratio</li> </ul>
	2. Site Access	<ul style="list-style-type: none"> <li>- Existing Site Plan with Topography Surrounding Traffic Flow</li> <li>- Proposed Site Plan with Building Use and Layout Zoning Access Points and Flow</li> </ul>
	3. Site Planning	<ul style="list-style-type: none"> <li>- Site Plan showing Building Coverage Setbacks Massing Greening Car Parking Space Provision for M&amp;E services Site Drainage System</li> <li>- Building Coverage Ratio</li> <li>- Calculation</li> <li>- Floor Area Ratio Calculation</li> <li>- Building Heights</li> </ul>
Architectural Design	4. Building Design	<ul style="list-style-type: none"> <li>- Design Concept Compatibility to Cultural Heritage Natural Environment Surrounding Urban Fabric</li> <li>- Plans</li> <li>- Elevations</li> <li>- Lighting and Ventilation Considerations</li> </ul>

Source: Building Permit Application Items for YCDC

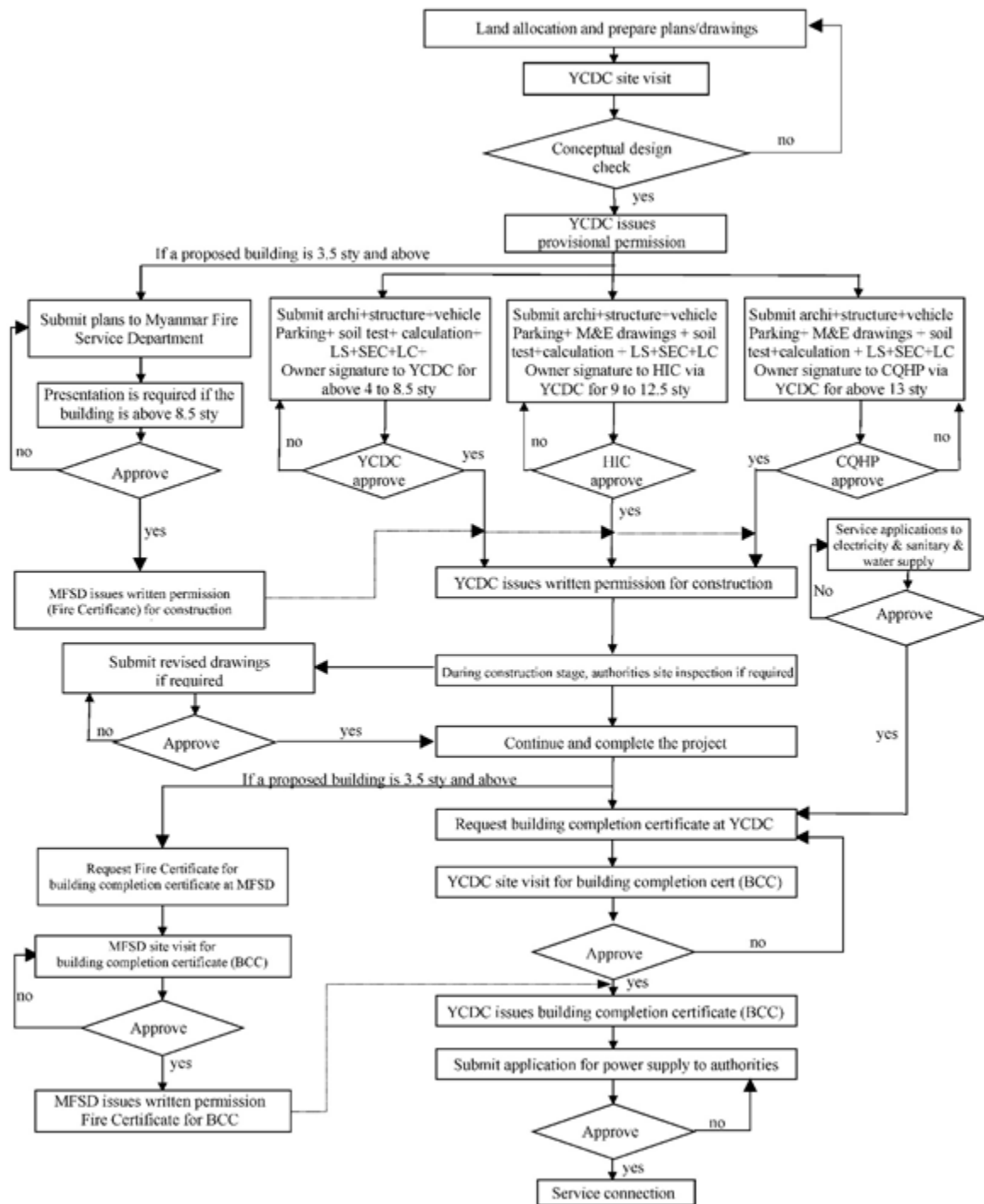
**(2) CQHP**

CQHP (Committee for Quality Control of High-Rise Building Construction Project) was established in 2002 and legally empowered by the President and MOC. It comprises of 27 members, who are retired

experts from architecture, engineering, electrical and mechanical engineering; many of whom have also served in other ministries. It is responsible for review of applications for buildings of above 12 stories in height in Yangon area. In particular: its duties and responsibilities include:

- Defining guidelines regarding the design of High-Rise Building in Myanmar
- Drawing up guidelines for Quality Control of the High Rise Building Projects which must be duly observed by Project Supervisors and Site Engineer;
- Evaluating Proposed Project Designs, as submitted by designers, whether relevant guidelines and current international Codes of Practice are followed or not. Where correction, amendment or redress is required, appropriate advice shall be rendered.
- Conducting on-site inspection, either on a regular or need-to basis, of Construction projects to monitor whether relevant guidelines are observed or not. Advisory service on Quality Control shall be given when or where required.
- Collaborations with all concerned departments and organizations towards the achievement in constructing High-Rise Buildings of high quality standard.

The review area covers areas of planning, architecture, structural, M&E, and fire safety. Upon review of an application, it provides a formal letter to YCDC notifying the result of the review. Upon the request of YCDC, CQHP members may attend site inspection during construction phase of a project. High rise projects currently under review are also published on CQHP website.



Source: YCDC

Figure 3-16 Building Permit Flowchart for YCDC

### Part 1: Urban Planning Considerations

To be Checked	Data Required	Drawings Needed	Responsible Body
1. Compliance with Current Land Use Zoning	Project Location Building use description Floor Area Ratio Building Coverage Ratio	Location Map showing o North Point o Surrounding Roads and Nearest Junctions o Surrounding Environment o Topography o Traffic Flow	
2. Site Access	Existing Site Plan with Topography Surrounding Traffic Flow Proposed Site Plan with Building Use and Layout Zoning		
3. Site Planning	Site Plan showing o Access Points and Flow o Building Coverage o Set Backs o Massing o Greening o Car Parking o Space Provision for M & E Services o Site Drainage System o Building Coverage Ratio Calculation o Floor Area Ratio Calculation o Building Heights	Site Plan showing o Plot Boundary o Surrounding Roads / Streets o Access from the Roads / Streets o Set Backs o Building Coverage o Building Heights o Green Area o Car Parking o Space for Water & Sanitation o Space Provision for M & E Services o Site Drainage System o Building Coverage Ratio Calculation o Floor Area Ratio Calculation	

### Part 2: Architectural Design Considerations

To be Checked	Data Required	Drawings Needed	Responsible Body
4. Building Design	Design Concept (with written notes?) o Compatibility to o Cultural Heritage o Natural Environment o Surrounding Urban Fabric o Conceptual Structural System o Elevations o Architectural Sections o Lighting and Ventilation Considerations	Perspective Drawing showing o Proposed building as it will appear in the mass of the surrounding urban fabric Plans showing o Uses o Dimensions o Door openings o Windows o Stairs and Vertical Shafts o Pressurization Shafts for internal staircases o Mechanical Ventilation Shafts for Basement Carpark o Escalators and Ramps o M & E Provisions Elevations showing o Ground Level o Building Height o Set Backs Architectural Sections showing o Mass and Voids o Floor to Floor Heights o Stair Section with Riser, Tread and Landing o Lift Shafts and Data o Ramps o Ceiling Heights o Verandah Handrail Heights	

#### Required Documents for permit extension

- NRC(National Register Card) copy of applicant ☐
- Copy of construction permit ☐
- A set of proposed drawing copy ☐
- Copy of inspection fee ☐
- Extension application form (Licensed contractor sign is needed for Highrise building) ☐

#### Required Documents for B.C.C(Building Complete Certificate)

- Department application form ☐
- NRC(National Register Card) copy of applicant ☐
- Copy of building permit ☐
- Copy receipt of inspection fee ☐
- Log Book ☐
- Receipt of Purchased Bin from Environment Conservation and Cleansing Department ☐
- 4-storeyed and above Building ☐
- Recommendation of complete tax of Home Revenue ☐
- Front, back and both sides photo of existing building and photo of electric meter, water meter, sewage existing ☐
- Recommendation of Engineering Dept(Water and Sanitation) ☐
- Recommendation of Engineering Dept(Road and Bridge) ☐
- Recommendation of Appraiser ☐
- Recommendation of Fire Bridge ☐
- Recommendation of Yangon Electricity Board ☐

### YANGON CITY DEVELOPMENT COMMITTEE

Figure 3-17 YCDC Building Permit Application Items



### YANGON CITY DEVELOPMENT COMMITTEE

## Engineering Department(Building)

### Noticable References

One who want to apply for bulking permit, permit extension, building complete certificate and demolishing permit must apply to YCDC, Engineering Department(Building).

Permit duration period is specified 11year for Building Permit. If permit time is expired it needs to apply for permit extension and Building Complete Certificate(B.C.C) must be applied for complete building.

Construction permit for fencing and one-storeyed to eight-storeyed building, can be applied at OS- S(One Stop Service) in YCDC or at the respective townships or online submission.

Construction permit for 9-storeyed and above building can be applied to HIC(Highrise Inspection Committee).

For building construction, if applied by that licensed engineer, issued by YCDC, licensed contractor and building engineer check and sign the drawing. Accredited Checker inspect the calculation of structural drawing of building, Engineering Department do just the Spot Check and issue permit more quickly.

[www.ycdc.gov.mm](http://www.ycdc.gov.mm)

#### Required Documents for 3-Storeyed and Lowered Building Permit

- Department application form ☐
- NRC copy of applicant ☐
- Original Land Certified Map and Copy of Demarcation Map issued by respective department within (1)year ☐
- Leased copy (To Check with Original) ☐
- Additional recommendation of ward administrator and adjacent plot for not objection. ☐
- Recommendation of township administrator for tax clearance ☐
- 3 set of proposed drawing signed by owner, licensed engineer(A1 size 33.1"x23.4") ☐
- Bond of structural engineer for building strength of 3-storeyed building ☐
- Bond of land owner, contractor, licensed engineer, structural engineer for 3-storeyed. ☐

#### Required Documents for Fencing Permit

- Department application form ☐
- NRC copy of applicant ☐
- Original Land Certified Map and Copy of Demarcation Map issued by respective department within (1)year ☐
- Leased copy (To Check with Original) ☐
- Additional recommendation of ward administrator and adjacent plot for not objection. ☐
- Recommendation of township administrator for tax clearance ☐
- Additional recommendation of ward administrator for being alive of applicant ☐
- 3 set of proposed drawing signed by owner, licensed engineer(A1 size 33.1"x23.4") ☐
- Bond of fencing for own compound ☐

#### Required Documents for 4 to 8% Storeyed Building Permit

##### Proposal Submission

- Department application form ☐
- NRC copy of applicant ☐
- Original Land Certified Map and Copy of Demarcation Map issued by respective department within (1)year ☐
- Leased copy (To Check with Original) ☐
- Additional recommendation of ward administrator and adjacent plot for not objection. ☐
- Recommendation of township administrator for tax clearance ☐
- 2 set of proposed drawing signed by owner, licensed engineer, licensed contractor(A3 Size 16.5"x11.7") ☐

##### Final Submission

- Soil Test Report with CD ☐
- Bond of land owner, contractor, licensed engineer, structural engineer ☐
- Recommendation of Fire department ☐
- 3 set of proposed drawing signed by owner, licensed engineer, licensed contractor, structural engineer(A1 size 33.1"x23.4") ☐
- Structure Calculation Sheets and Softcopy(CD) ☐

#### Required Documents for Demolishing Permit

- Department application form ☐
- NRC copy of applicant ☐
- Copy of Land Certified Map and Demarcation Map issued by respective department within (1)year ☐
- Leased copy (To Check with Original) ☐
- Additional recommendation of ward administrator and adjacent plot for not objection. ☐
- Recommendation of township administrator for tax clearance ☐
- Additional recommendation of ward administrator for being alive of applicant ☐
- Bond of land owner & licensed engineer ☐
- Bond of land owner ☐
- TEO recommendation for clearance of tenant who living in that building ☐
- Photo of demolish building and left & right adjacent building ☐

If you want to know more information you can enquire  
Engineering Department(Building), 10 Storey Office, Spin Road(near City Hall)  
Tel:+651 374055

2 0 1 6 . M a y

Source: YCDC

Figure 3-18 YCDC Building Permit Requirements

### (3) MCDC Building Permit Status

The building permit procedures in Mandalay for MCDC are generally similar to that of YCDC. However, for the part of the abovementioned Mya Dee Nanda Low Cost Housing (3.1.2) for which DUHD is responsible for, applications such as building permit or building completion have not been made to MCDC. While design drawings/construction drawings or structural calculations have been carried out by DUHD, MCDC has not received drawings or ETABS data, and thus MCDC has not been able to verify the designs or structural calculations by DUHD. According to MCDC executives, permit applications are not required from DUHD as it is a higher authority. It is planned that MCDC will carry out permit/application procedures even for MOC projects, make permit applications mandatory for all properties eligible for loan, and make improvements to achieve a framework where such related responsibilities will not be neglected.

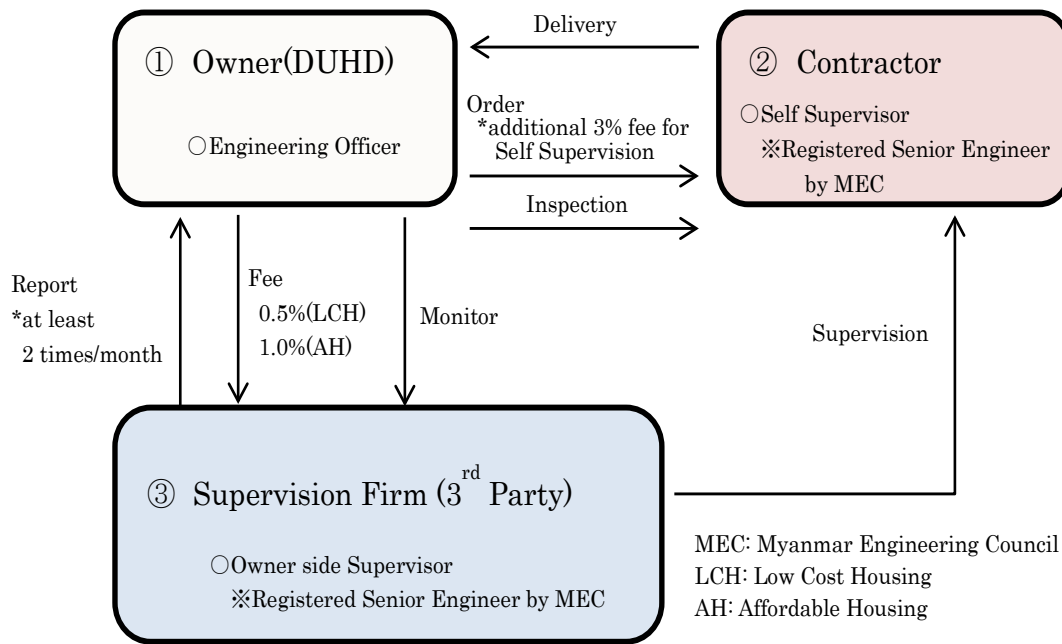


### 3.3 State of Housing Construction and Quality Control

#### 3.3.1 State of Inspections and Quality Control

##### (1) Inspection Framework

• The basic framework for construction supervision and construction management for the Low Cost Housing and Affordable Housing being ordered by DUHD (the Department of Urban and Housing Development) is as follows. This system is secured in the same way in both Yangon and Mandalay cities.



**Figure 3-19 Inspection system chart**

• When ordering housing, DUHD (1) forms a contractual agreement with the contractor (2), adding an additional fee equivalent to 3% of the construction costs as payment to cover construction management costs. The contractor carries out construction management at its own responsibility (this is referred to as self-supervision). The construction manager must be a Registered Senior Engineer certified by MEC (Myanmar Engineering Council).

• DUHD (1) also commissions a third-party supervision firm (3) to supervise the construction of the property. The contracting fee paid by DUHD for low cost housing (LCH) is 0.5% of construction costs. For affordable housing (AH), the fee is 1.0% of construction costs. The construction supervisor must be a Registered Senior Engineer certified by MEC.

• The contractor (2) carries out construction management (self-supervision) and performs self inspections at its own responsibility. In addition to having a construction manager posted full-time on site, the construction manager's boss visits the site and supervises the construction manager as part of a routine patrol.

- The supervision firm (3) conducts inspections based on a MOC inspection manual, and reports to DUHD (1) on a regular basis, at least once every two weeks.
- DUHD (1) verifies the state of construction based on reports made by the supervision firm (3) and actual on-site checks, etc.
- Payment from DUHD (1) to the contractor (2) is for work completed, paid in five installments of 20% each. No advance payments are made. However, DUHD is unable to pay unless it is able to verify the state of construction from reports made by the third-party supervision firm (3).

## (2) Standards Conformed to in Conducting Inspections

Strict inspections are carried out for all Low Cost Housing and Affordable Housing constructed by DUHD based on the MOC Inspection Manual.

The manual is structured as follows. In addition to providing detailed regulations with regard (a) the roles and qualifications of inspectors, (b) points for attention in various types of construction (concrete, steel-reinforcement, formwork, temporary falsework, foundations, brickwork, plastering, supply and processing (water supply, sewage, electricity, etc.)), (c) safety measures, and (d) requirement criteria for building materials, the manual also provides a checklist template (e) with items to be carried out by inspectors when performing on-site inspections and checks. The main matters listed in the manual are shown below.

### a) **Roles and qualifications of inspectors**

- Third-party inspectors from the supervision firm who conduct inspections must be endowed with specialist knowledge in the relevant fields of architecture, management abilities, organizational and communication abilities, and social common sense.
- Inspectors must examine the on-site work processes, documentation and work outcomes, the situation at the worksite itself, the state of storage of work materials at the worksite and the quality of the materials themselves; and must report their findings to the project owner and make suitable proposals based on those findings.
- Inspectors must have the abilities to read and understand schematics and blueprints in conjunction with other related drawings; to understand specifications documents, symbols and manuals, etc.; to understand limits; to understand the need to prioritize the implementation of important things; and be proficient in conducting visual inspections in both the horizontal and vertical directions.
- Three inspectors will be assigned to every worksite: an internal inspector (the contractor's construction manager), an external inspector (the supervisor firm's third-party inspector) and a local authority inspector (a DUHD staff member).
- Internal inspectors (i.e. the contractor's construction manager) visit the construction site on a daily basis and inspect whether or not the construction work meets the necessary requirements by referring to structural and architectural drawings, necessary standards, regulations and restrictions, etc.
- External inspectors (i.e. the supervisor firm's third-party inspector) verify the progress and quality

of work being conducted by referring to the required standards. They also verify whether or not work is progressing in accordance with structural and architectural drawings and the regulations and restrictions stipulated by the relevant authorities.

- Local authority inspectors (i.e. DUHD staff member) inspect whether or not the construction work is being carried out in accordance with local regulations and restrictions.

b) **Points for attention in various types of construction (concrete, steel-reinforcement, formwork, temporary falsework, foundations, brickwork, plastering, supply and processing (water supply, sewage, electricity, etc.))**

■ Concrete

- General (types and grades/quality of concrete, vibration methods...)
- Sample collection (frequency of sampling)
- Compression testing (days to carry out, number of samples, testing organizations...)
- Ordering of concrete (order item checklist, specification conditions)
- Casting (checking formworks, checking reinforcement work, joins, cleaning)
- Formworks and scaffolding (strength, resistance)
- Planning (amount and grade of concrete to be cast, methods, machinery/equipment and personnel planning...)

- Maintaining quality while working (slump testing, prohibited actions, test sample collection...)
- Pouring (methods, vibration, joining methods, masking...)
- Reporting of test results (report item checklist, required strength...)

■ Steel-reinforcement

- General (steel rebar reinforcement, bending processes, steel reinforcement...)
- Assembly of transverse reinforcement materials (assembly methods)
- Main steel reinforcement, axial steel reinforcement (construction methods, joining methods...)
- Concrete covering (contact conditions, minimal covering thickness, fireproof concrete)
- Dimensional errors (prescribed values)

■ Formwork

- General (basic points for attention)
- Cleanliness of formworks (garbage removal, cleaning, application of release agent coatings)
- Checks to be carried out before dismantling formworks (strength of concrete, stress, effects, need for surface finishing...)

- Time until dismantling (necessary strength, types, reference table of waiting times by temperature...)

■ Temporary structures (falseworks)

- General (regulations for designers and supervisors for each temporary structure, points for attention during their construction)

- Supervisors (experience, training to be carried out...)
- Materials (wood, steel, etc., and checks to be carried out before use)
- Inspection of assembly work (times at which inspections should be conducted)

## ■ Foundations

- General (types of foundations...)
- Boring/excavation (soil types, site conditions, disposal methods, work plans, groundwater...)
- Constraints (surrounding conditions, temporary construction methods...)
- Pile foundations (types, required resilience, soil conditions...)
- Driven foundations (construction methods, points for attention...)
- Concrete piles for buried pile construction method (construction methods, points for attention...)
- Load testing, calculation of load-bearing strength (calculation methods...)
- Tolerance in pile positioning (tolerance limit values)
- Pile testing (testing methods and types, required number of tests...)

## ■ Brickwork

- General (points for attention during bricklaying, types of brick stacking methods...)
- Brick stacking methods (points for attention with regard to each stacking method...)

## ■ Plastering

- General (types of plaster, mixing methods, points for attention...)
- Mortar finishes (composition mixing proportions, time by which mortar must be used up, finishing

methods, thickness, waterproofing...)

- Plaster finishes (composition mixing proportions, time by which plaster must be used up...)
- Mixed/combined finishes (composition mixing proportions, mixing methods...)
- Joint finishing (finishing methods, points for attention, types of joint, cleaning...

Points for attention during plastering work, types of stacking methods...)

- Stacking methods (points for attention with regard to each stacking method...)

## ■ General civil engineering work

- General (concrete, reinforcement materials, points for attention when constructing foundations, etc.)
- Concrete (materials, steel-reinforcement, formworks, composition inspections, slump testing, specimens...)

## ■ Supply and processing facilities (water supply, sewage, electricity)

- Water supply (soil, hygiene, materials (conformity with international standards), pump design, water demand, water sources, reservoirs...)
- Sewage (sewage outlet destinations, sewage processing, piping methods, flow separation...)
- Electricity (wiring methods, materials, earth-leakage circuit breakers, earthing, waterproofing, construction methods...)

## c) **Safety measures**

- General (preparing safety plans, compliance with regulations, on-site protection...)
- Safety and protective clothing (head protection, foot/leg protection, safety harnesses, life ropes, fall prevention devices, other protective gear to be worn where necessary)
- Matters for attention (carrying out training, on-site protection, scaffolding, helmets, dangerous materials and items, garbage...)

d) **Requirement criteria for building materials**

- Materials (cement, fine and coarse aggregate, concrete, bricks, deformed steel rebar)
- Required tests
- Reference standards
- Requirement values

e) **Checklist (template)**

- Pile driving (general, design)
- Piles for driving (general, installation)
- Steel rebar reinforcement (material quality, protection, placement and fixing, joins)
- Formworks and concrete (general, assembly, beam and slab formworks, pillar formworks)
- Concrete construction work (materials and composition design, placement and finishing)
- Bricklaying work
- Plastering work

※ *Third-party inspectors from the aforementioned supervisor firm refer to the checklist (template) outlined above to create their own checklists and carry out worksite supervision on a site-by-site basis.*

※ *For examples of actual checklists prepared by third-party inspectors from supervisor firms, please refer to the attached reference materials.*

(3) Actual State of On-site Inspections

The image below is an excerpt copy of an actual work supervision ledger actually submitted to DUHD by a supervisor firm's third-party inspection organization.

CLASSIC INSPECTION & QUALITY CONTROL GROUP ၏	
လုပ်ငန်းစစ်ဆေးချက်မှတ်တမ်း	
( ၂၀၁၆ - ၂၀၁၇ )	
၁။ စီမံကိန်းအမည်	အုပ်(သို့)ကမ်း)မြို့နယ်-ဗဟုတန်ဖိုးဖုန်းဗိမ္ဗူကွက်စီမံကိန်း၊ စာပိုဒ်း(၂၂)
၂။ အဆောက်အအုံအမည်	တိုက်အိမ် (၁၄)
၃။ တည်ဆောက်ရေးလုပ်ငန်း/အမျိုးအစား	(စာ)အိမ်(၄)ထပ်
၄။ ကန့်သတ်ချက်အမည်	အိမ်အိမ်စစ်ဆေးမှု ( ခိုင်လုံ၊ အဆောက်အအုံအား )

※ *Please refer to the attached reference materials for the full version*

**Figure 3-20 Supervision Ledger**







**Figure 3-23 Supervision Ledger**

**(4) State of On-site Construction Work and Actual State of Work Quality**

The survey group conducted on-site surveys in the Hlaing Thayar Township (where affordable housing development is currently underway), and the Kyan Sit Min project. The group carried out surveys and checks in relation to the state of construction work and work quality to the fullest extent possible by means of visual inspection and other such means. Details of the main checks performed and the survey group's findings are as follows.

**Table 3-12 On Site Checks and Findings**

Category	Checklist	Check result
Steel reinforcement	Is the placement and shape appropriate?	◎
	Has steel rebar been placed as shown in the design drawings?	◎
	Is the concrete covering thickness appropriate?	○
Formwork	Is the placement and shape appropriate?	◎
	Is the formwork properly secured in place?	◎
	Is the formwork installed horizontally and vertically?	○
	Is the inside of the formwork free of foreign objects and impurities?	◎
Concrete	Is the surface smooth?	○
	Is the concrete free of impurities?	○
	Is the concrete straight and even?	○

	Is the concrete constructed vertically and horizontally?	○
Brickwork	Are plumb bobs (plummets) and levelling strings being used?	◎
	Is sufficient mortar pointing being put in-between the bricks?	○
Plastering	Is the plaster being evenly finished?	◎
Worksite	Is the worksite in a tidy and well-organized state?	△
	Is proper safety management being carried out?	△

Legend: ◎ = no problem, ○ = almost no problem (80%), △ = quite a problem, × = problem

As a result of the survey it was confirmed at the visual level that, for the most part, the major construction processes at the site of the low cost housing development in the Kyan Sit Min project (steel reinforcement, concrete and brickwork, etc.,) are being carried out appropriately.

In reality, however, the state of the level of construction work differs depending on the contractor to which the work is being contracted, and with regard to properties being constructed by some of the contractors—amongst other issues—it was found that the finish of the concrete was quite poor, the precision of the formworks was low, and the work was not well finished overall.

There were also found to be many aspects such as worksite organization and safety management that require improvement. These areas may be considered as issues for the future.



(On-site conditions and the state of construction at the site)



**Figure 3-24 Worksite Photographs**

(State of formwork and concrete construction work → **No problems with fixing and levelling, etc.**)



**Figure 3-25 Worksite Photographs**

(State of foundations and steel reinforcement work → **No problems with placement of shape**)



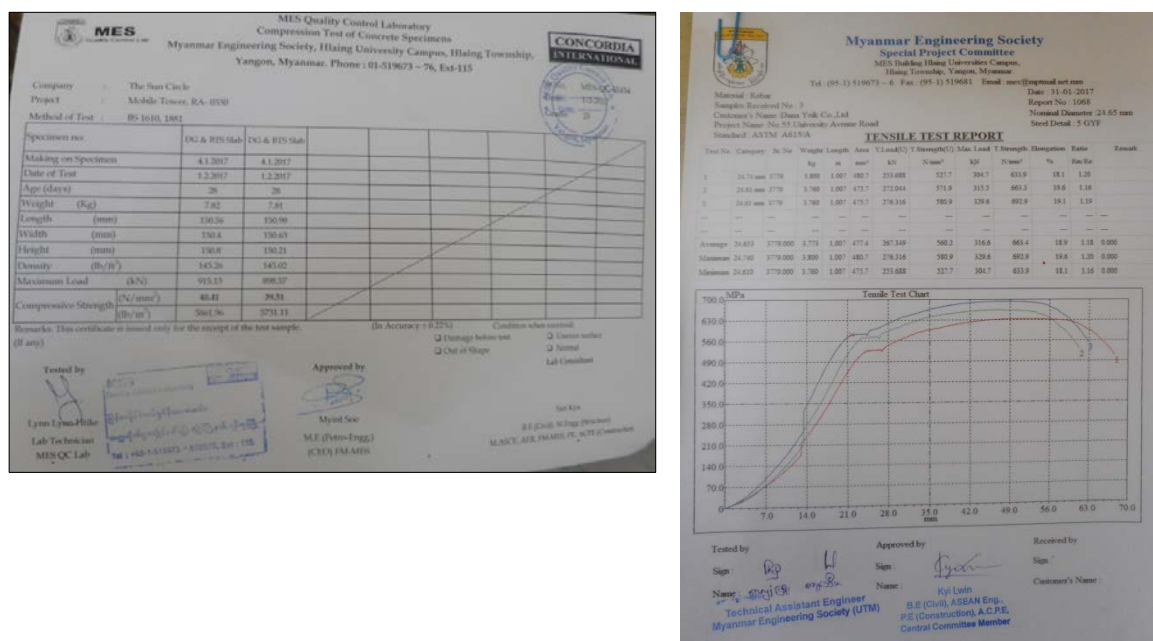
**Figure 3-26 Worksite Photographs**

(State of structural frame concrete and brick wall construction work  
→ **No problems with surface, horizontal and vertical construction or finishing**)

(5) About the Materials Being Used

In preliminary hearings it was confirmed that materials (i.e. steel rebar and concrete) used in the low cost housing and affordable housing constructed by DUHD must conform with ISO standards, or require certification by a third-party institution (limited only to domestic organizations based in Myanmar).

Currently, only three organizations in Myanmar (all of which are members of MES – the Myanmar Engineering Society) are capable of issuing such certificates. These inspection organizations carry out various tests such as compression and tensile strength testing on concrete specimens and steel rebar samples brought in by building contractors, and issue performance evaluation certificates. These evaluation certificates are attached to construction work reports submitted to DUHD.



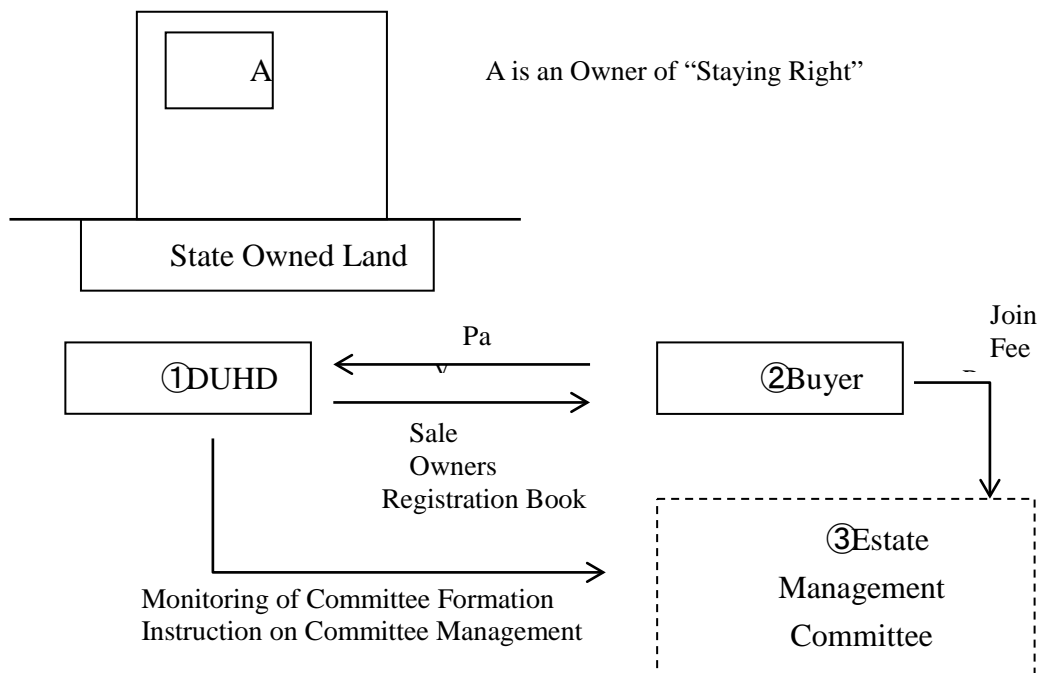
**Figure 3-27 Performance Certificates for Concrete and Steel Rebar Issued by the MES Quality Control Laboratory**



**Figure 3-28 MES Quality Control Laboratory Testing Equipment**

### 3.3.2 State of Management and Operation

We carried out preliminary hearings with DUHD's Housing Management Division regarding management and operation after the subdivision of low cost housing and affordable housing. The details confirmed were as follows.



**Figure 3-29 Management Framework Diagram**

- For subdivided housing built under DUHD projects, an Estate Management Committee is formed from owners who have acquired staying rights to housing on that particular estate. Owners pay maintenance and management fees of 5000MMK per month.

- All owners are obliged, by the regulations set forth in their Owners Registration Book (a kind of “Certificate of Rights” issued by DUHD) to become members of the Estate Management Committee and to pay maintenance and management fees. These obligations are not listed in the contract/purchase agreement.
- The Estate Management Committee carries out its obligation of collecting maintenance and management fees from the owners.
- This “Certificate of Rights” system was introduced in 1997. Some details of the system were revised in 2015.
- DUHD dispatches a single member of staff to monitor the formation and operation of this Estate Management Committee, and to offer advice, etc. There are some subdivided housing properties in the past where an Estate Management Committee was not formed. In such cases, DUHD has suffered due to the fact that complaints from owners, etc., come directly to DUHD.
- The maintenance and management of subdivided housing is carried out solely with Estate Management Committee funds. (DUHD does not provide any funding.)
- Currently, DUHD is engaged in efforts to establish a minimum standard for the maintenance and management of housing. This standard includes periodic inspections and large-scale repair work, etc. They would like you to share Japanese knowledge on this subject with them.
- Monthly maintenance and repair fees also include funds towards long-term repairs, but the current thinking is to collect funds towards repairs requiring large-scale expenditures at the time at which such repairs are actually carried out.
- In the case of low cost housing, maintenance and management fees of around 4,000~5,000MMK per month are planned.
- Collected maintenance and management fees are managed by the Estate Management Committee. Money received from owners is deposited into a bank account.
- In the case of private-sector projects, there are some housing developments that do not have a system such as this.
- Contracts state that liability for warranty against defects will be borne by the building contractor for a period of two years from the date of issue of the Building Completion Certificate (BCC), which is issued by YCDC (Yangon City Development Committee).
- So far, no complaints have been made with regard to the core structural framework of housing constructed and subdivided by DUHD. Most complaints made have centered around faults and defects with plumbing, doors and windows and sanitary ware.

### 3.3.3 Validation of Quality Aspects

Currently, with regard to low cost housing and affordable housing designed and built by DUHD, the MOC Design Department is carrying out the actual design work at its own responsibility in collaboration with external design offices. After carrying out internal checks, a checking application is then filed, and the architectural drawings, etc., are checked by YCDC.

The current situation with regard to structural calculations is that safety calculations are carried out using ETABS (structural calculations software) considering four types of load—live loads, dead loads, wall loads and finished loads—based on actual current conditions in Myanmar. The calculation data is also submitted to YCDC, where double checks are carried out to ensure that appropriate calculations of loads, etc., have been performed. In general, low cost houses and affordable houses are less than 8.5 stories, so the stress input to ETABS does not include seismic force.

On the quality control front, inspections are carried out for all housing in accordance with the Inspection Manual created by the Ministry of Construction's Building Department. In addition to the inspections conducted by DUHD staff and the contractors themselves, third-party checks by MEC senior engineers and other external inspectors are also conducted; and developments are operated in a strict manner whereby construction costs will not be paid until the housing has passed third-party checks.

As a result of this supervisory framework, the current actual situation in Myanmar is that—for the most part—on-site construction work is finished to a satisfactory level. This was confirmed visually by the survey group during the on-site survey conducted.

Based on the survey findings discussed above, we can judge that a system is in place with regard to the low cost housing and affordable housing built by DUHD to ensure sufficient quality as far as typical housing in Myanmar, and that this system is being operated appropriately. Situation and Issues of Housing finance and related legal system.



## Chapter 4 SITUATION AND ISSUES OF HOUSING FINANCE AND RELATED LEGAL SYSTEM

### 4.1 Overview of the Finance Market of Myanmar

#### 4.1.1 Overview of the Finance Market

In Myanmar, credibility of people to banks was low, and deposits were not made much due to the past three demonetizations, banking troubles in 2003, and the closure of three major banks. However, after the new government was established in 2011, the banking transactions are getting active and the amount of deposits also increased, reaching 19.32 million MMK in 2015 (3.5 times compared to 2011) (Table 4-1).

**Table 4-1 Deposit Situation of Citizens of Myanmar (2011-2015, Unit: million MMK)**

End of Year	Savings Deposits				Savings Certificates		Time Deposits			Other Deposits		
		State Owned Banks	Private Banks	Foreign Banks	State Owned Banks	Private Banks	State Owned Banks	Private Banks	Foreign Banks	State Owned Banks	Private Banks	Foreign Banks
2011 *	5542634	1822308	3441751	-	25556	-	29496	86408	-	117025	20090	-
2012 *	8497106	2127408	4964417	-	31265	-	30730	131355	-	1133028	78903	-
2013 *	11723478	2391736	6870730	-	41926	-	39926	666966	-	1572230	139964	-
2014 *	14886287	2610153	8187775	-	46398	-	53920	2113802	-	1548303	325936	-
2015	19323330	3320417	9572674	161489	47465	-	74078	4379018	23591	1351225	393373	-

\*Revised data in accordance with the IMF's Monetary Statistics Technical Assistance Mission during May, 2016.

Source: Central Bank of Myanmar.

Source: MOPF/Central Statistical Organization, 2016 Myanmar Statistical Yearbook, p.1714.

The number of bank branches is increasing. ATMs are also becoming widespread, and salary payment by account transfer has also become popular, so that it is often used to withdraw salaries. Since most of the incoming payments cannot be made by ATM, the payment is mainly transacted at a bank counter (transition to online transaction is also proceeding). Credit cards and debit cards are increasingly available, though they are not so popular among citizens and are not proliferating. The number of financial institutions as of 2016 is shown in Table 4-2. Three of these banks are Japanese banks (Bank of Tokyo-Mitsubishi UFJ, Sumitomo Mitsui Banking Corporation, Mizuho Bank) which have branch offices in Myanmar.<sup>12</sup> Microfinance is not included in the financial institutions controlled by CBM because microfinance is under the jurisdiction of MOPF.

12 CBM, "Financial Institutions", <http://www.cbm.gov.mm/>, accessed on June 29, 2017.

**Table 4-2 The Number of Financial Institution (as of end of August 2016)**

Particular	Headquarter	Branches
Total	99	1637
State-owned Banks	4	306
Domestic Private Banks	24	1331
Foreign Bank Branches	13	-
Finance Companies	15	-
Foreign Bank Representative Offices	43	-

Source: Central Bank of Myanmar.

Source: MOPE/Central Statistical Organization, 2016 Myanmar Statistical Yearbook, p.1721.

Regarding financial legislation, the former Financial Institutions Act enacted in 1990 was completely revised, and in January 2016 the new Financial Institutions Law was enacted. According to the new law, paid-up capital for banks established in Myanmar must be 20 billion MMK or more, and for foreign branch offices and subsidiaries it must be 75 million US dollars or more. Banks also have to deposit 25% of the net income for the current fiscal year as a reserve (until 100% of the paid amount is paid up). Furthermore, there is a regulation that the capital adequacy ratio should be 8% and Tier 1 capital should be 4%.

Although the old law did not have adequate provisions for entry of foreign capital, the new law provides a new framework for foreign capital entry in order to promote foreign capital investment. In addition, it regulates the types of banks, the business contents, the definitions, business contents, and regulations for non-bank institutions, such as commercial banks and development banks. The provisions of electronic money, electronic banking, mobile banking, payment decision system, and bank disposition processing are also included.

Traditionally, Myanmar banks have conducted credit decision based mainly on evaluation of value of collateral. However, it is difficult to make an appropriate risk assessment, and even small amount of loans makes the lenders hesitate to provide. Therefore, the new law provides the establishment of the Credit Bureau. According to the new law, CBM can ask all banks, non-banks and other financial institutions to submit customer's credit information through a credit inquiry system. In addition, the CBM can obtain necessary information for supervision from the Credit Bureau<sup>13</sup>. CBM is working on the formulation of detailed administrative rules of the Credit Bureau, but as of June 2017, no information was obtained that the detailed regulations were enacted. According to IFC, which supports the establishment of the Credit Bureau, it is said that the committee on the Bureau has already been established, and several megabanks have already provided customer credit information to the Bureau that are preparing to operate. There is information that CBM approval is planned to be obtained, and the operation is expected to start within one year after approval.<sup>14</sup>

According to CBM, from July 2017, the regulations that define the framework for credit investigation are being enforced. According to this regulation, each bank must create rules on credit risk policy and credit risk procedures, and apply to CBM for permission. CBM asks applicants for amendment of the rule if it does not meet the criteria by CBM.

13 CBM, "Financial Institution Law", Jan 25, 2016, [http://www.cbm.gov.mm/sites/default/files/regulate\\_launders/financial\\_institutions\\_law\\_updated\\_by\\_cbm\\_20160303website-1\\_0.pdf](http://www.cbm.gov.mm/sites/default/files/regulate_launders/financial_institutions_law_updated_by_cbm_20160303website-1_0.pdf), accessed on June 29, 2017.

14 NNA ASIA, "Myanmar first credit bureau expects an approval in next month," August 2017, <https://www.nna.jp/news/show/1644358>, accessed on Feb 13th 2018.

#### 4.1.2 Situation of Loan Business by Private Commercial Banks

##### (1) Types of Loan Business

According to CBM, each bank is providing various loans and there are two forms of loans used in Myanmar: (1) ordinary loan and (2) overdraft. (1) pays interest rate based on a fixed period (3 months, 1 year, etc.) for the total amount of borrowing. (2) sets the maximum loan amount. Borrower uses only a part of it, receives loans, and pays interest on the basis of the amount used. As for the whole loan, (1) occupies about 10%, (2) occupies about 90%, and (2) is widely used. As types of loans, staff loan<sup>15</sup>, commercial loan, hire purchase, SME loan, and mortgage loan are used. However, the Financial Institution Law, Art.52 determines only "lending" and "mortgage financing," and it does not stipulate by type. Therefore each financial institution individually names their products.

According to CBM, Hire Purchase is based on the Financial Institution Law Article 52 (t) "Mortgage financing" and has the same characteristic as lending and it is put in a subcategory of lending, so that the restriction of interest rate as 13% is applied. In general, it is targeted to purchase movables such as cars. In the case of a car, there are two schemes. One is that dealer company deposits ownership book of a car to a bank without changing the holder's name (as the name of a dealer). The other one is the way that a purchaser deposits ownership book after changing its holder's name from a purchaser to a bank. According to CBM, mortgage is a type of hire purchase in nature, and it is said that there are increasing number of banks which call special hire purchase products for housing purchase as mortgage loan.

Interest rate is determined by rules by CBM. The current maximum interest rate for lending is 13% and minimum interest rate for deposit is 8%<sup>16</sup>. Trend of actual interest rate is shown in Table 4-3. Overall, from 2006 to 2015, deposit rate as well as lending rate is on a declining trend. Regarding other design of loan scheme, such as loan terms, periods and collateral, each bank decides on their own decisions. Since many banks actually have difficulty in finding long-term financing, they offer loans with a loan period of less than 1 year. Long-term loans are also possible if financial resource is available. Loan deposit ratio is supposed to be 70% of the total deposit balance. However, according to CBM, this regulation is to avoid bankruptcy due to excessive lending by banks, so that if private banks borrow from their capitals, other funds, MEB or international financial institutions, they are able to lend more than 70% of loan deposit ratio.

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<sup>15</sup> Regarding staff loans, there are rules such as the upper limit of the amount of borrowing and less than 5% of the borrowers of the bank as a whole.

<sup>16</sup> As of September 2017. Revision is under consideration currently.



**Table 4-3 Trend of Interest Rate (2006, 2010-2015)**

Particulars	2006	2010	2011	2012	2013	2014	2015
Central bank rate	12.00 <sup>1</sup>	12.00	12.00	10.00 <sup>4</sup>	10.00	10.00	10.00
Treasury bills and bonds							
1. Three month treasury bills	4.00	4.00	4.00	4.00	4.00	4.00	4.00
2. Two year treasury bonds	-	10.50 <sup>2/</sup>	10.50	8.75 <sup>4</sup>	8.75	8.75	8.75
3. Three year treasury bonds	10.50 <sup>1</sup>	11.00 <sup>2</sup>	11.00	9.00 <sup>4</sup>	9.00	9.00	9.00
4. Five year treasury bonds	11.00 <sup>1</sup>	11.50 <sup>2</sup>	11.50	9.50 <sup>4</sup>	9.50	9.50	9.50
Deposit rates							
1. Call deposits	*	*	*	*	*	*	*
2. Fixed deposits							
a. Three months	12.00 <sup>1</sup>	12.00	10.00-12.00 <sup>3</sup>	8.00-10.00 <sup>4</sup>	8.00-10.00	8.00-10.00	8.00-10.00
b. Six months	12.00 <sup>1</sup>	12.00	10.00-12.00 <sup>3</sup>	8.00-10.00 <sup>4</sup>	8.00-10.00	8.00-10.00	8.00-10.00
c. Nine months	12.00 <sup>1</sup>	12.00	10.00-12.00 <sup>3</sup>	8.00-10.00 <sup>4</sup>	8.00-10.00	8.00-10.00	8.00-10.00
3. Savings bank accounts							
a. Basic rate	12.00 <sup>1</sup>	12.00	10.00-12.00 <sup>3</sup>	8.00-10.00 <sup>4</sup>	8.00-10.00	8.00-10.00	8.00-10.00
b. Premium on three-year minimum balance	-	-	-	-	-	-	-
4. Savings certificates (Twelve-year maturity)	12.00 <sup>1</sup>	12.00	12.00	9.00 <sup>4</sup>	9.00	9.00	9.00
Lending rates							
1. State economic enterprises							
a. Working capital loans	-	-	-	-	-	-	-
b. Financial loans	-	-	-	-	-	-	-
c. Term loans	-	-	-	-	-	-	-
2. Co-operatives							
a. Working capital loans	17.00 <sup>1</sup>	17.00	15.00 <sup>3</sup>	13.00 <sup>4</sup>	13.00	13.00	13.00
b. Term loans	-	-	-	-	-	-	-
c. Paddy loans	-	-	-	-	-	-	-
3. Private sector							
a. Agriculture							
i. To village banks	-	-	-	-	-	-	-
ii. To farmers	17.00 <sup>1</sup>	17.00	15.00 <sup>3</sup>	8.50 <sup>5</sup>	8.50	5.00 <sup>6</sup>	5.00
b. Car purchase loans	-	-	-	-	-	-	-
c. House repair and other loans	-	-	-	-	-	-	-
d. Small personal loans	36.00	36.00	36.00	36.00	36.00	36.00	36.00
e. Trade							
i. Working capital loans	17.00 <sup>1</sup>	17.00	15.00 <sup>3</sup>	13.00 <sup>4</sup>	13.00	13.00	13.00
ii. Term loans	17.00 <sup>1</sup>	17.00	15.00 <sup>3</sup>	13.00 <sup>4</sup>	13.00	13.00	13.00

Notes: \*No. transaction for call deposits effective from 1st October, 2003.

Source: Central Bank of Myanmar.

\*\* Effective from October 2, 2014, Interest rate for call deposits is based on the respective banks.

1. Effective from 1st April, 2006. /2. Effective from 1st January, 2010.

3. Effective from 1st September, 2011. /4. Effective from 1st January, 2012.

5. Effective from 1st June, 2012. /6. Effective from 1st June, 2014.

Source: MOPF/Central Statistical Organization, 2016 Myanmar Statistical Yearbook, p.1716.

## (2) Existing Finance Services for Housing Buyers by Private Banks

According to information we obtained through interviews, some of private banks have just begun or been preparing for provision of finance services for housing buyers. Target and basic schemes are slightly different from each other. The outline of such schemes are as follows:

**Table 4-4 Summary of mortgage loan by Private Banks**

Main customers of loans	Employees of the bank (as a part of a welfare program) Middle-upper class Buyers of units built and sold by YCDC
Targeted property of the mortgage loan	Units of buildings developed by private developers (about 180,000 to 350,000 yen/m <sup>2</sup> ) Units of buildings developed by private developers (about 3.5 million to 140 million yen) Units of buildings developed by YCDC (about 2.5 million yen)
Loan condition	Term: 2 to 15 years Interest Rate: 9 to 13%
Down payment	30 to 50%
Form of loan contract	Two party agreement (bank and borrower) Tri party agreement (bank, borrower, and guarantor)
Type of collateral	Ownership book, sales & purchase agreement Special power <sup>17</sup> Guarantor
Timing of ownership transfer <sup>18</sup>	At the time of loan agreement At the time of full repayment of loan (a bank keep ownership during loan term)
Definition of default	More than 90 days delay of repayment <sup>19</sup>
The rate of default	Less than 1% or not occurred yet
Credit risk taker at the time of default by borrowers	Bank YCDC
How to execute collateral at	Compulsory execution by a court <sup>20</sup>

<sup>17</sup> Special Power (the Contract Act, Article 182) is a document as like “carte blanche” which allows disposition of property in any ways on behalf of the Principle. It is legally binding, whereas selfexecution is not allowed and court procedure is necessary.

<sup>18</sup> As stated later (4.3.1.(1)), concept of ownership in Myanmar law and “shoyuken”(ownership) in Japanese law is different. Therefore, this study avoids to use the term “shoyuken” and instead uses “ownership”.

<sup>19</sup> Based on the CBM regulation.

<sup>20</sup> Regarding the execution of collateral on immovable properties, court's procedure is stipulated. The Code of Civil Procedure, Order 34, Transfer of Property Act, Art.67. Ministry of Justice, Government of Japan, Actual Situation of Conflict Resolution Syste of Civil and Commercial Relationship, etc. in Myanmar, <http://www.moj.go.jp/content/001179166.pdf>, accessed on Feb 13th, 2018.

the time of default	
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As contained in Table 4-4, YCDC works with private banks and is implementing the low cost housing projects<sup>21</sup>. Table 4-5 shows the details of two projects among three low cost housing projects that YCDC has implemented since 2013, using mortgage loans by a private bank are shown in Table 4-5. Since the first phase is currently finished, YCDC is planning the second phase, and private banks offering mortgage loans are being selected. The mortgage loan that the private bank offers in collaboration with YCDC for purchasers of housing units by YCDC is considered to be the closest to the loan for low cost housing that is the main target in this study<sup>22</sup>.

**Table 4-5 Low-cost Housing Development Project using mortgage loan by a Private Bank**

	Bo Min Yaung Housing Project	Bo Ba Htoo Housing Project
Location	Dagon (New), North 11.72 acre	Dagon (North) 5.26 acre
Building Type	<ul style="list-style-type: none"> <li>• 4 rooms 8 stories/25 towers, 800 units</li> <li>• U600TypeB2B 618sq.ft—20 towers, 640 units</li> <li>• U900TypeA3B 961.5sq.ft—5 towers, 160units</li> </ul>	<ul style="list-style-type: none"> <li>• 4 rooms 8 stories/14 towers, 448 units</li> <li>• U600 2B 565sq.ft—60 towers, 22 units, 614sq.ft—3 towers, 330units</li> <li>• U900 3B 877sq.ft—6 units, 927sq.ft—90 units</li> </ul>
Sales Price	<ul style="list-style-type: none"> <li>• U600 MMK25.50 million</li> <li>• U900 MMK34.70 million</li> </ul>	<ul style="list-style-type: none"> <li>• 565sq.ft MMK23.70 million</li> <li>• 614sq.ft MMK25.50 million</li> <li>• 877sq.ft MMK32.90 million</li> <li>• 927sq.ft MMK32.70 million</li> </ul>
Start of construction	July 10, 2013	May 7, 2013
Completion Date	July 10, 2015	May 7, 2015

Source: YCDC

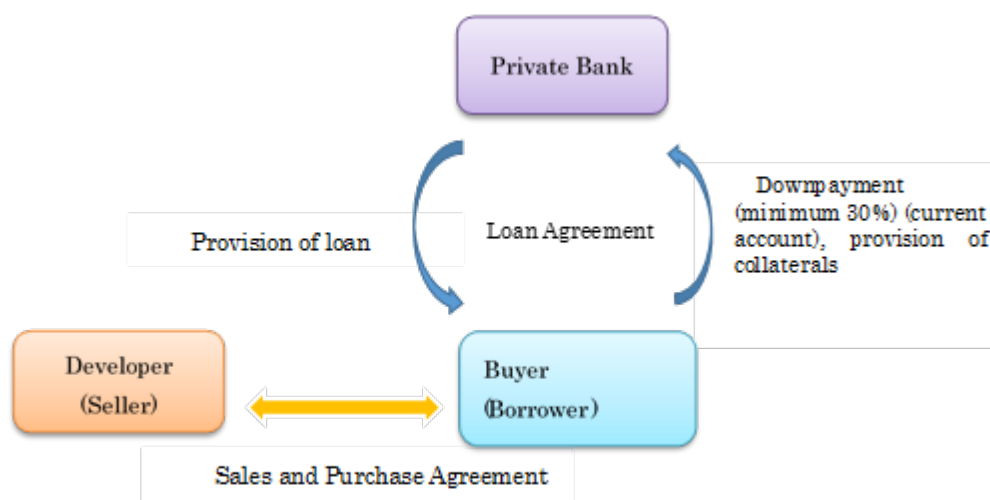
Mortgage loan of private banks for purchasing properties developed by ordinary private developers (not by YCDC) are usually provided based on the form of a two party agreement (Figure 4-1). This means that a private developer and a buyer conclude sales and purchase agreement, and a private bank and a buyer (a borrower) conclude loan agreement. Such structure where loan provision is implemented based on two-party agreement and credit risk is taken by lenders is what it should be. Under this structure, ownership of a unit is transferred to the buyer at the time of loan agreement, and mortgage is set by submitting the ownership book, the sales and purchase agreement, etc. to the bank<sup>23</sup>. In case a borrower defaults, the bank claims to court,

21 There was also an opinion that the project which YCDC conducts with a private bank is affordable housing development rather than low cost project.

22 In addition, regional government such as YCDC is not subject to the Government Premises Eviction Act in 1955, and there is no authority for YCDC to do self-enforcement of eviction from the property even if there is a default, and a judicial proceeding is required.

23 Mortgage by keeping title deed as collateral (1882 Transfer of Property Act, Article 58 (f)).

forecloses the target housing, disposes it then provides the proceed for the remaining loan balance. However, it may take 4-5 years to go through these procedure. In addition to such concern for time, vulnerability in effectiveness of collateral due to insufficient legal system including registration system is recognized as a serious obstacle for banks to expand their services in housing finance. There is an estimate, on the other hand, that the default rate of housing finance could be as low as less than 1% as housing is directly related to people's life.



**Figure 4-1 Two party agreement scheme for general mortgage loan**

Besides this, as a problem pointed out by private banks, restrictions on interest rates by CBM are obstacles for implementing long-term loans, etc.. Due to the high interest rate, the demand for loans has not increased. When reselling a housing unit, it is necessary to rewrite the name of the original sales agreement. However, there are transactions that have not rewritten the name of owner in order to avoid stamp tax payment. It is difficult for banks to provide housing loans to such transactions of used housing units. Some banks state that even though the bank keeps the title related documents of the targeted property unit, there is a risk that the borrower sells the property to a third party without perception and permission of the bank.

## **4.2 Current Situation and Issues of Housing Finance by CHDB**

### **4.2.1 Overview of CHDB**

#### **(1) Background and Issue on CHDB**

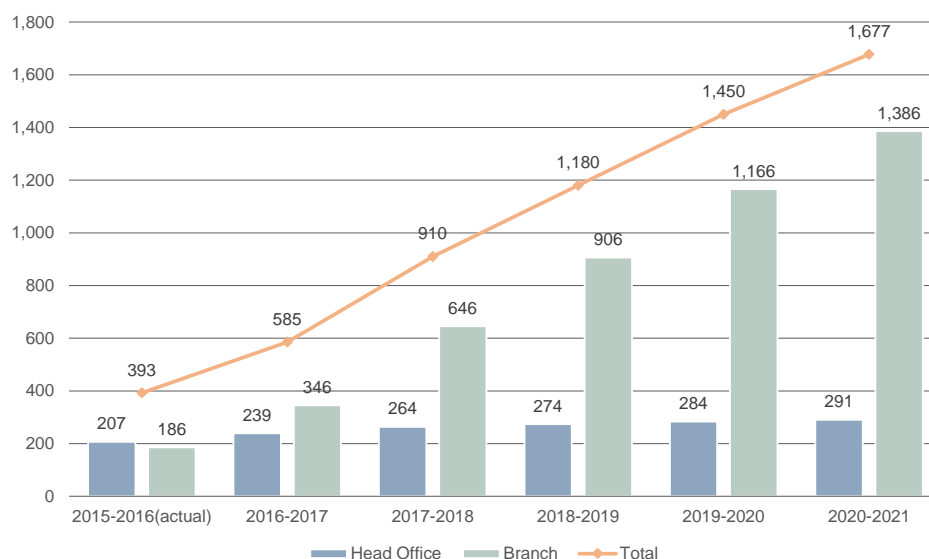
The Construction and Housing Development Bank (CHDB) was established 2013 as semi-government bank under the Special Company Act and the Myanmar Companies' Act. CHDB aimed establish the housing loan scheme for the long term housing loans in affordable and low cost housing projects.

CHDB's mission is "To realize the potential for financial resources towards the development of construction, urban and housing sector and to enable the citizens to have a chance to own a house by increasing capital through the integration of the government's responsibility, public's deposits and shares." To achieve the mission, CHDB set up the followings 4 objectives.

1. To aggregate and facilitate potential financial (capital) investment, necessary to develop construction and housing sector, from both local and international, banks and financial institutions
2. To support the construction loans, housing loans and mortgage, by providing short term, mid- term and long-term loans
3. To implement plans for increasing number of public Deposits
4. To support to increase the amount of financial resources to broaden the international trading

## (2) Organization and Staffs

The total branches are 7, total staffs are 393(End of March of 2017) and 207 staffs in headquarter, 186 staffs in total branch. Now CHDB has established human resources plan for year of 2021. From this plan, total staffs are planned 1677, total staffs of headquarter are 291, total branches are 1386.



**Figure 4-2 Human Resources Plan for Year of 2021**

## (3) Existing services and financial situation

CHDB has 3 main services; Banking service, loan service and other services. The details are followings Table 4-6.

**Table 4-6 Existing services**

Banking Service	Current Account Savings Deposit Account Time or Fixed Deposit Account
Loan service	Commercial Loan Project Loan Construction Loan Private Loan Development Loan Housing Mortgage Loan
Other Service	Remittance Payment Order, Bank Guarantee, Performance Guarantee Debit Card International Banking (LC, TT, Trade Financing)

The financial situation of CHDB as of March 31, 2017 is shown in Table 4-7. This table shows the relationship between procurement of funds and procurement operation. Liabilities and Equity indicate sources of funds, Assets shows how they operate their resources. In addition, statement of comprehensive income is shown in Table 4-8, statement of changes inequity is shown in table 4-9, and statement of cash flow is shown in table 4-10.

**Table 4-7 Statement of Financial Position**

	2017	2016	2015
<b>Assets</b>			
Cash in hand and at bank	79,149,259,813.45	63,354,673,431.90	92,915,634,264.77
Loan and Overdraft	165,693,189,698.68	130,456,586,727.99	56,937,252,005.44
Investment securities:			
Government securities	15,000,000,000.00	15,000,000,000.00	17,000,000,000.00
Other	200,000,000.00	200,000,000.00	200,000,000.00
Other assets	5,308,462,957.62	3,246,478,229.48	2,655,332,123.38
Property and equipment	18,443,611,386.28	18,098,141,783.20	15,011,451,092.95
Intangible Assets	371,863,782.40	435,667,635.60	
<b>Total assets</b>	<b>284,166,387,638.43</b>	<b>230,791,547,808.17</b>	<b>184,719,669,486.54</b>
<b>Liabilities</b>			
Deposits from customers	87,521,224,477.73	65,956,589,583.75	28,002,921,042.28
Borrowings	55,197,000,000.00	42,160,000,000.00	40,270,000,000.00
Other Liabilities	20,760,432,520.95	17,707,276,635.10	53,652,731,582.75
<b>Total liabilities</b>	<b>163,478,656,998.68</b>	<b>125,823,866,218.85</b>	<b>121,925,652,625.03</b>
<b>Authorized Share Capital</b>	<b>200,000,000,000.00</b>	<b>200,000,000,000.00</b>	<b>100,000,000,000.00</b>
<b>Equity</b>			
Share capital	112,910,000,000.00	95,110,000,000.00	59,000,000,000.00
Retained earnings	72,730,639.75	4,807,681,589.32	1,569,016,861.51
Reserves	7,705,000,000.00	5,050,000,000.00	2,225,000,000.00
<b>Total equity</b>	<b>120,687,730,639.75</b>	<b>104,967,681,589.32</b>	<b>62,794,016,861.51</b>
<b>Total liabilities and equity</b>	<b>284,166,387,638.43</b>	<b>230,791,547,808.17</b>	<b>184,719,669,486.54</b>
<b>Acceptances, Endorsements &amp; Guarantee</b>	<b>9,860,074,821.00</b>	<b>12,821,669,300.50</b>	<b>2,819,217,983.00</b>

**Table 4-8 Statement of comprehensive income**

	2017	2016	2015
Interest income	21,024,894,881.22	14,976,291,608.61	11,026,243,329.29
Less-Interest expenses	8,655,594,029.64	5,507,304,376.16	2,880,047,649.04
Net interest income	12,369,300,851.58	9,468,987,232.45	8,146,195,680.25
Fee and commission income	821,707,727.92	1,270,425,033.53	745,424,127.84
Other income	1,367,674,667.75	1,018,223,489.22	40,263,679.42
Disposal gain	207,000.00		
<b>Total Income</b>	<b>14,558,890,247.25</b>	<b>11,757,635,755.20</b>	<b>8,931,883,487.51</b>
Less-Personnel expenses	1856296706	2,035,839,132.29	1,162,156,162.01
Rent expenses	51,388,400.00	40,909,150.00	36,197,415.00
Remittance handling expenses	17,290,358.62	6,583,270.30	8,270,180.08
General and administrative expenses	614,329,595.29	938,285,240.26	855,263,172.65
Depreciation expense	788,920,840.92	642,685,844.75	747,372,643.77
Other expenses	867,764,767.29	590,336,025.39	1,022,623,914.00
Specific loan loss provision	11,298,528.46		
<b>Total expenses</b>	<b>4,207,289,196.82</b>	<b>4,254,638,662.99</b>	<b>3,831,883,487.51</b>
<b>Profit / (Loss) before income tax</b>	<b>10,351,601,050.43</b>	<b>7,502,997,092.21</b>	<b>5,100,000,000.00</b>
Income tax	2,588,000,000.00	1,875,000,000.00	1,275,000,000.00
<b>Net profit / (loss) for the year</b>	<b>7,763,601,050.43</b>	<b>5,627,997,092.21</b>	<b>3,825,000,000.00</b>
Other comprehensive income			
<b>Total comprehensive income</b>	<b>7,763,601,050.43</b>	<b>5,627,997,092.21</b>	<b>3,825,000,000.00</b>

**Table 4-9 Statement of changes inequity**

	Share capital	Retained earnings	Reserves	Total
Balance at 1 April 2015	59,000,000,000.00	1,569,016,861.51	2,225,000,000.00	62,794,016,861.51
Retained Earnings Adjustment		435,667,635.60		435,667,635.60
Issued share capital	36,110,000,000.00			36,110,000,000.00
Amount transferred to statutory reserves		(1,410,000,000.00)	1,410,000,000.00	
Amount transferred to reserve for contingencies		(5,000,000.00)	5,000,000.00	
Amount transferred to general reserve		(1,410,000,000.00)	1,410,000,000.00	
Total comprehensive income for the year		5,627,997,092.21		5,627,997,092.21
Balance at 31 March 2016	95,110,000,000.00	4,807,681,589.32	5,050,000,000.00	104,967,681,589.32
Dividend paid (Note 25)		(4,260,037,000.00)		(4,260,037,000.00)
Issued share capital	17,800,000,000.00			17,800,000,000.00
Amount transferred to statutory reserves		(1,940,900,000.00)	1,940,900,000.00	
Amount transferred to reserve for contingencies		(10,000,000.00)	10,000,000.00	
Amount transferred to general reserve		(704,100,000.00)	704,100,000.00	
Total comprehensive income for the year		7,763,601,050.43		7,763,601,050.43
Proposed dividend		(5,583,515,000.00)		(5,583,515,000.00)
<b>Balance at 31 March 2017</b>	<b>112,910,000,000.00</b>	<b>72,730,639.75</b>	<b>7,705,000,000.00</b>	<b>120,687,730,639.75</b>



**Table 4-10 Statement Cash flow**

For the year ended March 31

	2017	2016
Cash flows from operating activities		
Profit before income tax	10,351,601,050.43	7,502,997,092.21
Adjustment for non-cash items:		
-Retained earning adjustment		435,667,635.60
- Depreciation	788,920,840.92	642,685,844.75
-Fixed asset adjustment	438,129.95	
-Disposal gain	(207,000.00)	
-Write off	35,400.00	
-Amortization for intangible assets	198,018,790.20	
	11,338,807,211.50	8,581,350,572.56
Changes in operating assets and liabilities:		
-(Increase)/decrease in loan and advance	(35,247,901,499.15)	(73,519,334,722.55)
-(Increase)/ decrease in other assets	(1,348,984,728.14)	8,853,893.90
-Increase/ (decrease) in deposits	21,564,634,893.98	37,953,668,541.47
-Increase/ (decrease) other liabilities	(3,232,060,585.69)	(36,545,454,947.65)
	(6,925,504,707.50)	(63,520,916,662.27)
Income taxes paid	(2,588,000,000.00)	(1,875,000,000.00)
Net cash provided by/ (used in) operating activities	(9,513,504,707.50)	(65,395,916,662.27)
Cash flow from investing activities		
Investment in government securities bond		2,000,000,000.00
Purchase of intangible assets	(134,214,936.95)	(435,667,635.60)
Purchase of property and equipment	(1,134,956,974.00)	(3,729,376,535.00)
Sale proceed for fixed asset	300,000.00	
Net cash used in investing activities	(1,268,871,910.95)	(2,165,044,170.60)
Cash flow from financing activities		
Issued share capital	17,800,000,000.00	36,110,000,000.00
Borrowing from abroad	13,037,000,000.00	1,890,000,000.00
Dividend paid	(4,260,037,000.00)	
Net cash used in financing activities	26,576,963,000.00	38,000,000,000.00
Net increase/ (decrease) in cash in hand and at bank	15,794,586,381.55	(29,560,960,832.87)
Cash in hand and at bank at 1 April 2016	63,354,673,431.90	92,915,634,264.77
Cash in hand and at bank at 31 March 2017	79,149,259,813.45	63,354,673,431.90

Existing Loan types, account number, amount are shown in Table 4-11. There is only 3.5% of mortgage loan.

**Table 4-11 Loan service list on CHDB**

Account Type	Nos. of A/C	Amount (Mil. MMK)	Percentage
Construction	75	125,713.89	76.28%
Hire Purchase(Room & machinery)	128	671.50	0.41%
Housing Mortgage Loan	705	5,801.44	3.52%
Commercial (Business)	43	12,691.12	7.70%
Trade Refinancing Facility	6	19,924.00	12.09%
Total	957	164,801.95	100%

#### 4.2.2 Existing housing loan services condition and problem on CHDB

##### (1) Overview of Housing Mortgage Loan service

In November 2015, CHDB started pilot project of mortgage loan as 8 years installments, and officially started as 10 years installments in August 2016. In addition, there were already finished hire purchase scheme service in 2014. It was only 4 years installments in Mandalay (2017 is final year in the hire purchase installments period).

Also, before August 2016, CHDB required open the “saving account” for contract. But after August 2016, there were required open the “housing saving account” for contract.

Mortgage loan by CHDB is limited to buyers of housing apartments built by DUHD only. i.e. the mortgage service is not available for housing built by private developers. However, CHDB wishes to widen its target also to properties built by private companies, and to those having various finance need relating to housing including relatively high income people. Due to the limitation of available fund, it was targeted only to the middle income people with regular income for low cost housing & affordable housing<sup>24</sup>.

The sale price of Low Cost housing by DUHD is “construction cost + office fee of MOC 10%”. Land fee is free of charge, infrastructure is provided by the government. Consequently, it is lower than normal market price.

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<sup>24</sup> According to DUHD Housing Development Division, buildings constructed by DUHD are both commercial and residential properties, and different ownership books are issued respectively. Housing loans by CHDB are only for residential properties and cannot be used for commercial purposes. There are cases where restaurants and shops are being operated on the ground floor part of Low Cost housing subject to CHDB's mortgage loan. Though such usage is inherently a prohibited act, necessity and demand are high, so that DUHD accepts the situation. The building design of such ground floor itself is also designed for usage as stores. If there are complaints from the surroundings, DUHD gives caution. Even if the unit is used as a store, residency is a requirement, so that at such stores unit owners are managing their stores while living in the same store part.

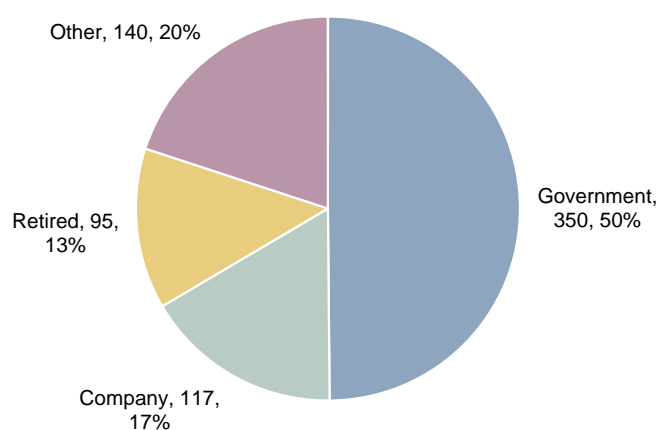
## (2) Implementation Status of mortgage loan

Table 4-12 shows the number of mortgage loan supplies as of March 30, 2017 (This number is Already started to living = started the loan). From November 2015 to August 2016, since 464 loans have started as an 8-year loan but the 3 customer has already paid at all, so the number of loans are 461. Also, in the 10 year loan started from August 2016, 241 loans have been started. Totally the current loan users are 701 now. Although Hire Purchase is a limited number of supplies in Mandalay, the installments period is 4 years, 125 customer will finished in this year(2017).

There are only 77 customer did not pay on schedule (8 year loan, As at April 24, 2017). In addition, although there are no situation that payment became difficult due to the reason of death of the main payer in past experience. If the payment term will extend in future, it may occur such a huge risk on payment.

**Table 4-12 Supply number of Loans**

Account Type	Nos. of A/C	Amount (Mil. MMK)
Hire Purchase (4yrs, 9-5-5-5%) (MDL)	125	369.56
Housing Mortgage Loan (8yrs, 12%)(YNG)	336	2,499.52
Housing Mortgage Loan (8yrs, 12%)(YNG)	37	486.13
Housing Mortgage Loan (8yrs, 12%)(MDL)	88	911.51
Housing Mortgage Loan (8yrs, 12%) (NPT)	3	48.23
Housing Mortgage Loan (10yrs, 12%)(YNG)	241	1,856.05
<b>Total</b>	<b>830</b>	<b>6,171.00</b>



**Figure 4-3 Occupation of housing mortgage loan customer**

### (3) Housing loan scheme

#### a) Loan processing

The each step of investigation process for mortgage loan is shown in figure 4-4. Procedures for applying for mortgage loan, customer should open the “Housing saving account” at CHDB. Open process took around 10-20 minute at the every branch office, and customer limited over 25 year old age with Myanmar nationality. After open the account, customer should deposit by 30 lakh MMK and select a housing location, type and price. 30 lakh deposit is 1<sup>st</sup> screening process of to become a candidate for eligible of house buyer. In addition, CHDB check the down payment as over 30 % of total cost for housing or not. If customer account satisfy the 30 lakh MMK & over 30% down payment, they can submit an application to CHDB & DUHD. CHDB check the house hold income and take an interview to customer, DUHD set the priority with score, i.e. house hold number, age, experiences of home buying.

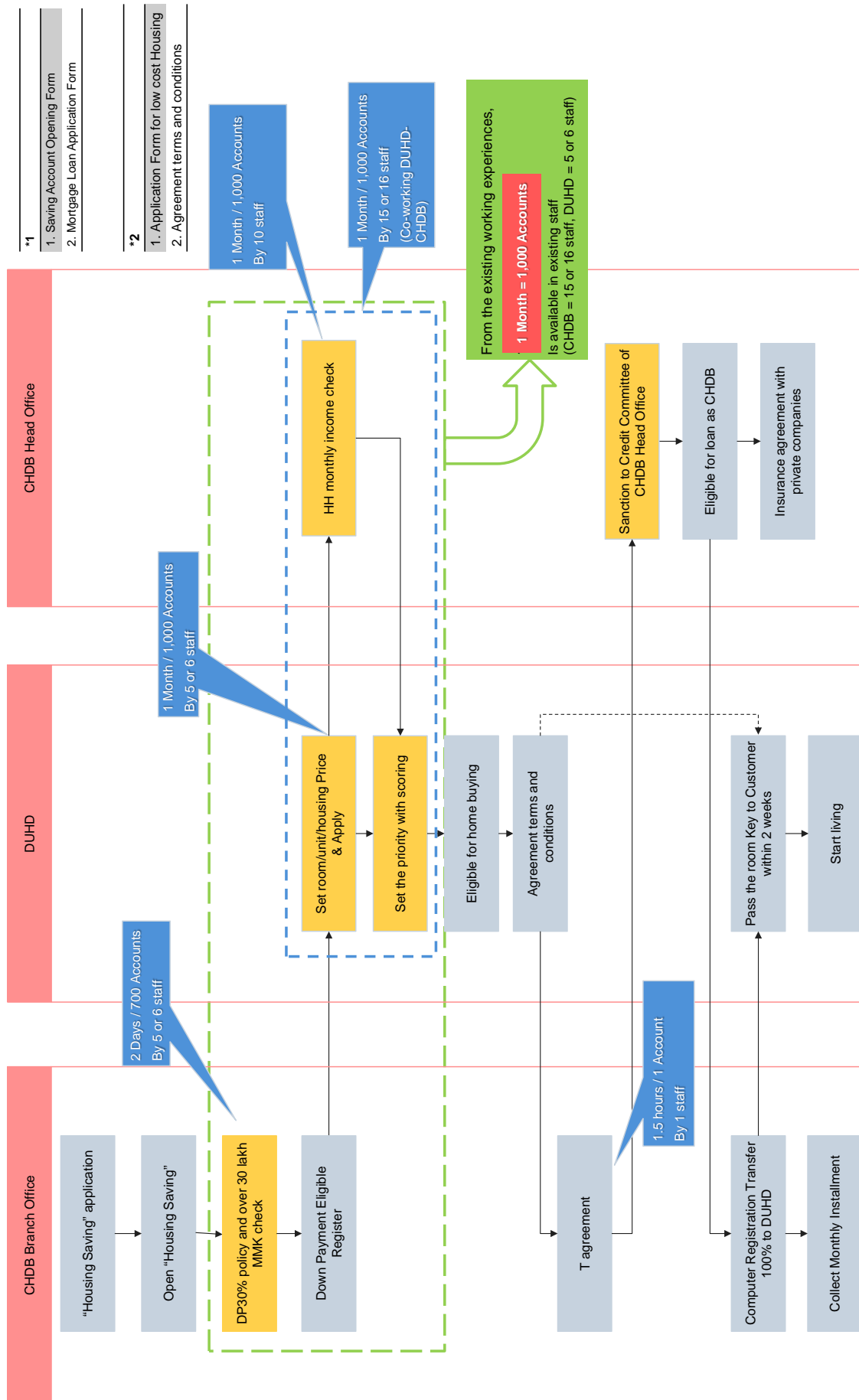
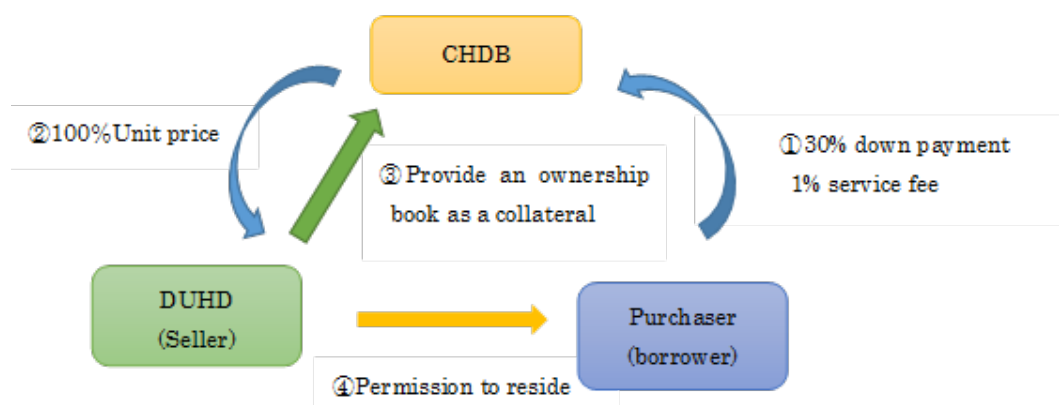


Figure 4-4 Investigation flow on CHDB's housing lone

Subsequently, the applicant pays 30% of the house price deposited in a housing saving account as down payment, and 1% as service fee (only for the first time) to CHDB (2017 version tri-party agreement (hereinafter referred to as "tri-party agreement" ) 4. (b)). Upon completion of payment to CHDB, the tri party agreement is concluded between DUHD, CHDB, and the Buyer as shown in Figure 4-5.<sup>25</sup> The Buyer bears the stamp duty on tri party agreement (tri party agreement 4. (e)). 100% of purchase price of the subject apartment unit is paid to an account of DUHD from CHDB within 7 days after conclusion of the tri party agreement (tri party agreement 3. (b)). DUHD issues certificate of temporary dwelling, “attended order,”<sup>26</sup> and issues two ownership registration book<sup>27</sup> (original document and duplicate), but its Buyer's name remains blank and one book is transferred to CHDB as a collateral, keeping the owner DUHD. So ownership does not transfer to the Buyer at the time of tri party agreement<sup>28</sup>. DUHD deposits the original ownership book to CHDB as a collateral of mortgage loan, and CHDB keeps it (tri party agreement 2. (b)). DUHD keep other duplicate book and register. When DUHD receives payment of 100% of unit price from CHDB, DUHD permits the Buyer to reside (tri party agreement 2. (a)), so that the Buyer can start residing in the target unit.



**Figure 4-5 Tri party agreement scheme**

#### b) Loan Administration

During the loan period, the buyer pays the loan installment repayment (monthly) and 12% annual interest to CHDB (repayment of principal and interest) (tri party agreement 4. (c), (d)). Although it is also possible

<sup>25</sup> In the tri party agreement, the Buyer (borrower) must decide two witnesses and three guarantors from relatives as old as 18 years or more.

<sup>26</sup> In the case of DUHD's Low Cost housing sales, normally the DUHD Housing Development Division issues an temporary residence certificate (attended order) for home buyers when DUHD receives 100% housing price. This is a proof of the same class as the Building Completion Certificate (BCC) issued by YCDC for private developers. BCC means a certificate of completion of construction in English. However, in Myanmar it is a certificate meaning that the unit is ready to live. In the case of DUHD's rental housing, allotment order is issued.

<sup>27</sup> The contents of the ownership book are the same for low cost, affordable, middle cost, and high cost housing.

<sup>28</sup> According to DUHD Housing Development Division, the ownership book is of the same nature as the contract. Because there was an ownership book generally used for car purchase, there were strong demand and request from home purchasers to issue ownership book. Hence DUHD decided to issue ownership books. There was no legislation about ownership book, though the book is subject to the 1872 Contract Law. The serial number of the book is unified in the Yangon area.

to make a lump sum payment before deadline, fee for repayment commission is not required (tri party agreement 3. (i)). As mentioned above, since DUHD has granted a permission to reside to the Buyer, the Buyer can live in the target residence until the loan is paid off, during which the Buyer pays water utility expenses etc. (tri party agreement 4. (i)). In addition, the Buyer pays monthly rent to DUHD (tri party agreement 4. (g)). The rent amount varies depending on the unit price, but it is very small (Table 4-13). According to the CHDB Legal Department, the tri party agreement is actually a sales contract of DUHD property. However, taking the form of lease is a process whereby if Buyers (borrowers) default loan repayment to CHDB, DUHD forces the Buyer to leave the residence based on the Government Premises Eviction Act in 1955, and seizes the target residence and re-sell it. For this purpose it is necessary to take the form of lease.

The buyer (borrower) is prohibited from selling, donating, or leasing the target residence to a third party until the loan is repaid (tri party agreement 2 (c), 4 (k)). Even if a borrower pays off early, transfer is prohibited for 5 years from the start of the loan (ownership book 5. (a)) <sup>29</sup>. This is because the purpose of low cost housing by DUHD is to provide housing to low income families, so that DUHD needs to prevent the case that low cost housing is purchased in the aim of resale and earning profit. The five-year resale prohibition clause applies only to low cost housing and it is not applicable to affordable housing, middle cost, and high cost housing.

**Table 4-13 Standard of Rent Payment**

Housing Unit Price (10,000 MMK)	Rent (MMK/month)
<3000	1000
3000-5000	2000
>5000	3000

Source: CHDB

#### c) Procedure after full repayment

When the loan is paid off, CHDB sends a complete payment certificate to DUHD and returns an ownership book with the name of DUHD deposited as a collateral to DUHD.<sup>30</sup> DUHD changes the name of the ownership book to the Buyer within 14 days after receiving the notification from CHDB, delivers the ownership book to the Buyer, and ownership of the property is transferred to the Buyer (tri party agreement

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<sup>29</sup> According to DUHD Housing Development Division, the 5 year's prohibition on resale was added to ownership books in 2015. The prohibition was introduced since housing by DUHD was inexpensive at that time and there were numbers of people purchasing the housing for speculative purposes. Transfer of housing ownership to buyer is at the time of repayment of loan. However, a temporary residence certificate (Attended Order) is issued and delivered to a buyer at the start of loan, so that the buyer is able to start temporal residence. While residing temporarily, the name of the ownership book is still DUHD, though rules of ownership book (management rules, etc.) are applied to the resident and it is necessary to comply with them.

<sup>30</sup> Since the return of the ownership book to DUHD is not stated in the tri party agreement, so that it should be specified.

2. (i), 3 (g), 4 (o), 5 (b))<sup>31</sup>. According to CHDB, currently the ownership of building units is not allowed in Myanmar as described later (2.6.1.2), so that this ownership differs from so-called “ownership”, and is the right which only the government can provide to the people, namely “the right to live and transfer”. The land is still owned by the government, though the Buyer does not need to pay the rent to the government. The land can be used free of charge, and the Buyer can resell the right to live and transfer. In that case, it is necessary to undergo procedures to change the name of the ownership book to the next Buyer with a consent by DUHD.<sup>32</sup> The submission documents necessary for the name change accompanying the resale are (1) an original certified sales contract (deed)<sup>33</sup> and (2) an application form. DUHD receives and keeps them.

d) Procedure at the time of default

If the Buyer retards the repayment of the loan, 0.04% per day<sup>34</sup> will be collected as an overdue charge (tri party agreement 3. (f), 4. (f)). In the event that a buyer fails to repay for 4 consecutive months, it is a default case and DUHD forces the Buyer to withdraw from the unit by self-imposed execution based on the Government Premises Eviction Act in 1955, and without appealing to a court, DUHD sells the unit to a third party (tri party agreement 2. (d) (e) (f), 3. (h), 4. (l)).<sup>35</sup> According to the DUHD Legal Department, when DUHD enforces by itself, officials of DUHD implement the action with cooperation of police officers. If the procedure proceeds smoothly, the Buyer withdraw from his/her unit in a couple of months.<sup>36</sup>

DUHD pays loan balance and interest to CHDB by money obtained through resale (tri party agreement 2. (e)).<sup>37</sup> According to the DUHD Legal Department, if there is a surplus, they return it to the original Buyer, but since there is no provision in the tri party agreement it is necessary to specify it clearly<sup>38</sup>. There is no particular agreement as to which of CHDB and DUHD will bear the loss if the resale price is less than loan balance. DUHD has not taken any budgetary measures in that case and DUHD insists that the loss should be borne by CHDB.<sup>39</sup> On the other hand, according to a reply from CHDB, if the re-sale price is less than loan

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31 The purchaser returns the aforementioned certificate of temporally residence and in a exchange he/she receives ownership book from DUHD.

32 There is a page of title change in the second part of the ownership book, and when reselling, it is necessary to change the title name to the reseller and certification by DUHD is necessary. When re-reselling, the reseller describes the re-reseller on the next page, and DUHD certifies. This is repeated after that.

33 Sales and purchase agreement certified by registration Office, ward office, or pleader office (private lawyer office).

34 This is 12% annual interest rate divided by 365 days. This is provided in tri party agreement, 4. (f).

35 However, according to CHDB and DUHD, so far there is no case of default.

36 If the resident resists, the procedure may be prolonged. In the tri party agreement 2.(e), DUHD needs to carry out seizure and sale of the subject property within 60 days after receiving a notice of borrower's default from CHDB. According to the DUHD Housing Mortgage Department, as a method of sale, first, CHDB returns the ownership book in the name of DUHD which CHDB has kept as collateral, and DUHD cancels the ownership book. Then DUHD issues a new ownership book and sell it to a third party newly. For this reason, this sale is not a resale from the original buyer to a new buyer, but rather as a re-sale in which DUHD terminates the original tri party agreement with CHDB and the original buyer and DUHD directly sells the unit to the new buyer.

37 It is unknown how long it will take to re-sell, as it has never been done before.

38 There was such provision in 2016 version of tri party agreement, whereas it was deleted in 2017 version. DUHD Legal Department answers the reason on this point that recently property price in the housing market tends to decrease, so that DUHD cannot guarantee to refund full amount which the Buyer paid.

39 According to the DUHD Legal Department, when considering the mortgage scheme with CHDB, house prices continued to rise, so that it was not



balance, DUHD should supplement the loan balance with its own budget. Thus there is a discrepancy between opinions of each party. It is necessary to make an agreement in this case between DUHD and CHDB and to specify it in a tri party agreement. In addition, as the initial selling price the resale price at the time of default is decided based on the construction cost plus 10% MOC administrative fee. Depreciation and physical condition are also taken into consideration.<sup>40</sup> Although it can be said that the execution of collateral is more certain than loan scheme by private banks in the point that DUHD is able to enforce collateral without undergoing court procedures at the time of default. Hence it can be said that the number of CHDB loans is growing. However, in the case if DUHD breaches (default) the provision in a tri party agreement and it neglects to resale the property unit, CHDB needs to take trial proceedings. Therefore, when considering DUHD as a servicer of receivables collection of CHDB, it also can be said that CHDB bears servicer’s risk.

e) Issues in allocation of surplus money

There are some issues of the current tri party agreement in regard to the relationship between allocation of surplus money and price of unit resale. Simplified and schematized above is a model example of Figure 4-6. For example, suppose the Buyer purchases a unit with MMK10 million by a tri party agreement. CHDB pays buyer's down payment MMK3 million and housing loan MMK7 million to DUHD for purchase price of MMK10 million. Suppose that the Buyer defaults at the stage of repaying MMK5 million loan. Suppose DUHD forcibly sells the property at the same price as the original price of MMK10 million. DUHD repays MMK2 million, which is the loan balance from this MMK10 million to CHDB (interest is not considered for simplification). Then, DUHD pays MMK8 million to the Buyer as remaining amount. The Buyer originally paid CHDB MMK 3 million as a down payment, and since the Buyer has already repaid MMK5 million loan, it can be said that this conclusion to receive MMK8 million from DUHD is reasonable (Table 4-14 Case 1).

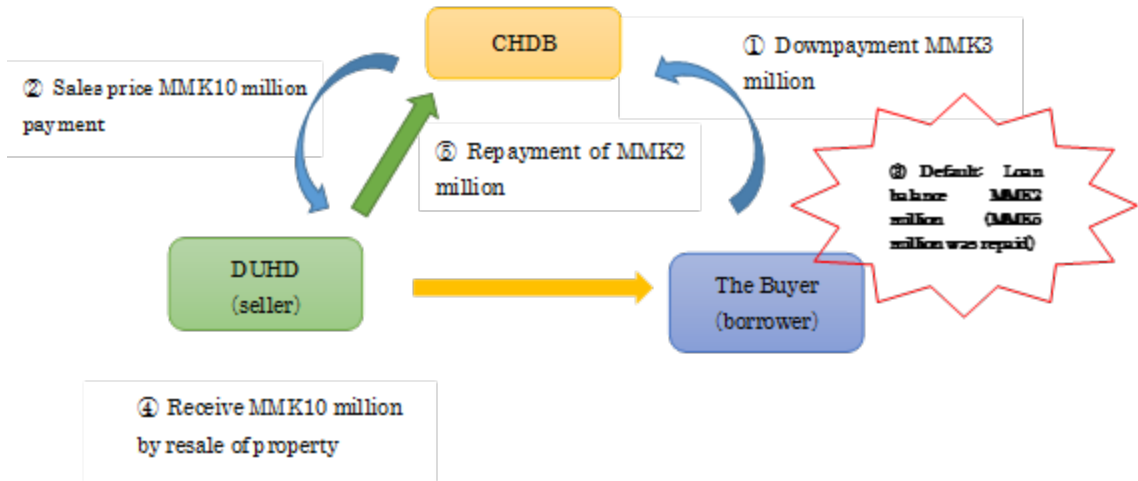


Figure 4-6 A Model Case Study of Sales of Housing Unit by 10 million MMK

expected that the resale price would be less than the loan balance.

40 DUHD will repair the walls and make it look like a new construction. Since the default case has not yet occurred, such procedure has never been taken yet.

The problem is when the resale price exceeds the initial price and it becomes MMK12 million (Table 4-14 Fictional Case Studies of Resale Price and How to Deal with Surplus Amount Case 2). Even in this case it can be said that DUHD will return MMK8 million to the Buyer, but it is a matter of to whom MMK2 million remaining as an excess surplus belongs. Although there is no provision in the tri party agreement, according to the explanation of DUHD, it is said that the excess surplus money is paid to the Buyer, so this MMK2 million is also paid to the Buyer. However, if DUHD admits this, in the case that the price of the target property is raised, the Buyer dares to default the loan repayment and asks DUHD to re-sell the property having moral hazard to receive a surplus and make profit, so that this result is not reasonable. There is no reason for attributing profits to the Buyer who defaulted a loan. It is valid to respect the fact that the ownership of the property is reserved by DUHD until the loan is paid off, and when the resale price exceeds the initial price DUHD, as the owner of the property, should acquire the surplus, and it needs to be written in the tri party agreement as well.

Furthermore, allocation of cases when the resale price falls below the initial price and it becomes MMK8 million (Table 4-14 Fictional Case Studies of Resale Price and How to Deal with Surplus Amount Case 3) is also a problem. In this case, DUHD repays MMK2 million to CHDB. DUHD refunds MMK6 million to the Buyer. Nevertheless, the Buyer initially paid MMK3 million down payment and repaid MMK5 million, so that in total the Buyer paid MMK8 million by his/her own fund. Hence MMK2 million loss occurs for the Buyer. In this case, no agreement has been made on whether DUHD will return such MMK2 million from its own budget to the Buyer, and there is no provision in the tri party agreement. There is a view that DUHD may have to pay back the purchase price of MMK10 million initially received (actually MMK8 million after repayment of loan balance to CHDB), since the tri party agreement is terminated and restoration to original state is necessary. As a result, there is a possibility that the Buyer brings the case to the court and claims the refund to DUHD. Therefore, if refund of the surplus money is limited to the resale price, this should be written in the tri party agreement.<sup>41</sup>

Finally, case 4 in is allocation when the resale price falls below the loan balance and is only MMK1 million. In this case, the Buyer cannot receive the repayment amount of MMK8 million in the same reason as case 3. Repayment from DUHD to CHDB is MMK1 million. Loan balance is MMK2 million, so that there is MMK1 million loss and CHDB takes the loss. Surplus money is zero, so that there is no refund to the Buyer.

**Table 4-14 Fictional Case Studies of Resale Price and How to Deal with Surplus Amount**  
(Down payment 300, Housing loan 700, Unit: 10,000 MMK)

Case	Original price (1)	Purchaser Down payment (2)	Purchaser Loan repayment amount (3)	Loan balance (4)(700 - (3))	Resale price (5)	DUHD⇒CHDB Repayment amount (4)	Surplus repayment to purchaser ((2)+(3))	Exceed surplus ((5)-(1))
1	1000	300	500	200	1000	200	800	0
2	1000	300	500	200	1200	200	800	200

<sup>41</sup> It is desirable to include in the tri party agreement a provision that the amount of "initial selling price" and "resale price", whichever is less, may be refunded to the Buyer after reduced the loan balance which DUHD repays to CHDB.

3	1000	300	500	200	800	200	600 (▲200deficit)	0
4	1000	300	500	200	100	100 (▲100deficit)	0 (▲800deficit)	0

Source : JICA Study Team

f) Application of CHDB mortgage loan to second-hand units or units constructed by private developers

In the case where the purchaser resells the property as a second-hand property to another, it is questionable whether a new purchaser can use the mortgage loan of CHDB again. Currently, the mortgage loan of CHDB covers only the newly built units. According to CHDB, this is because the mortgage has just started and CHDB is currently offering mortgage loan only for newly built properties. However theoretically it is possible to apply mortgage loan to resale of the right to live and transfer, since the resale is the same as sales of newly built unit in the point that it takes the form that ownership is granted from DUHD by approval of DUHD. Therefore it is said that there is no problem to include resale of unit in the target of CHDB mortgage loan. In the future, it is also possible to apply housing loans to existing second-hand properties. However, there was also a view of CHDB staffs that there had been no application to use the mortgage loan for second-hand properties until now, so that there seems no demand.

Furthermore, it is also a problem whether CHDB mortgage loan can be used for purchaser of units developed by private developers. As for CHDB's response to this concern, it is impossible because of collateral limitation. According to CHDB, currently DUHD provides a collateral and if the purchaser defaults, it assumes full responsibility (however opinions of CHDB and DUHD are different as described before, regarding whether DUHD guarantees 100% loan or not). Therefore, in the sale of units constructed by private developers, CHDB considers that it is problematic that there are no guarantors at the time of default. However, as an opinion of the investigator, if the problem of collateral is solved, there is no legal restriction on applying CHDB's housing loan to purchase of units constructed by private developers and it seems theoretically possible.

g) Relation with Tax System

Generally, in Myanmar, income tax is imposed at a 10% tax rate on capital gains resulting from the sale of fixed assets. This is the same for sale of housing units, although it applies only transactions which exceeds 10 million MMK (about 1 million yen). Also, for real estate transfers of 10 million MMK or more, it is necessary to pay stamp tax before registering the sales contract at the Ministry of Agriculture and Irrigation (MOALI).<sup>42</sup>

The stamp tax must be paid by the seller, but if the seller is the government, it does not pay stamp tax.

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42 In the case of land and building sales, 2% of trading value and, in Yangon area, 2% stamp duty to YCDC, in total 4% needs to be paid.

Stamp tax of agreement for mortgage by keeping title deed as collateral is 0.5%. Also, for sale of condominium units, buyers pay 3% of commercial taxes and are obligated to declare. However, according to MOPE, Internal Revenue Department (IRD), there were many people who did not declare the transaction in order to avoid tax. It is asked that if a loan for housing purchase is to be provided by ODA, conditions that buyers properly declare the sale of housing units and pay tax should be set for the sales and loan contracts.<sup>43</sup> According to DUHD Housing Development Division, when buyers resell DUHD housing, they are permitted on condition that they prove income tax payment. In addition, the stamp tax is borne by the buyer and DUHD does not sell it unless there is such payment.

## 4.3 Legal Issues of Housing Market and Housing Finance

### 4.3.1 Deficit of Unit Ownership (Pro rata Title)

The Myanmar Act does not permit the ownership of apartment units, and it is a fundamental problem in providing housing loans. In order to make housing mortgage scheme in Myanmar society, to include private banks in loan providers as well as CHDB, and to expand the scope of loans to units constructed by private developers, establishment of system of unit ownership is necessary. Under present circumstances, even if a Buyer pledges a mortgage on a unit targeted by mortgage loan, it is doubtful whether or not creditors can execute repossession and recover their credits certainly at default. In what follows, after organizing principle of concept of immovable property in Myanmar law, this issue is discussed according to the difference between public housing developed by DUHD and housing developed by private developers.

#### (1) Concept of Immovable Property in Myanmar Law

As the prerequisite knowledge of the discussion, according to the Registration Act, immovable property is defined including land, building, and benefits arising from land or other objects adhering to the land. Since buildings are grasped together with land as incrustation of land (Article 2, paragraph 6, 9),<sup>44</sup> thereby classifying unit ownership is also not admitted under the current Myanmar law. Furthermore, according to the 2008 Constitution (the Constitution of the Republic of the Union of Myanmar, 2008), the ultimate owner of land is a country and private ownership of land is not allowed<sup>45</sup>.

However, under the Myanmar law, it is said that the country can grant the right to use land to individuals

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<sup>43</sup> If tax is not paid, there is a penalty. There was law amendment in recent years, and 100% of the tax amount is imposed on a fraud report which does not declare purchase properly. In case of delay of tax payment, 10% of the tax amount is charged.

<sup>44</sup> However, depending on the purpose of the law, the meaning of immovable property is somewhat different. Mori Hamada & Matsumoto “Property Rights Law in Myanmar,” Report on Legal System: Republic of the Union of Myanmar, March 2013, pp.159-160, <http://www.moj.go.jp/content/000110249.pdf>, accessed on the 15th, 2016.

<sup>45</sup> There are some lands called “freehold” in Yangon or Mandalay on which something like ownership is recognized. Takeshi Mukawa, Kana Manabe, Atsushi Inoue, Legal Front Line in Myanmar: Theory and Practice, Shojihoumu, 2016, p.201.

and companies (Article 37 (a), (c) of the Constitution of 2008). The right to use land takes a form of grant/lease, license etc.. In the case of grant/lease rent is generally cheap enough to be neglected, and although there are conditions of the period, it is usually expected to be renewed.<sup>46</sup> Therefore, a private person who is granted grant/lease can use the land as well as the owner in Japan. When the term, “ownership” or “owner”, is used in Myanmar, it often points to the holder of rights such as grant/lease, and it is necessary to be careful.

## (2) Sale of a Unit of Housing by DUHD

Public houses built on the land owned by DUHD associate with the land, and the ownership of the building belongs to DUHD together with the land. DUHD is conducting sale of public housing built by DUHD, and mortgage loan by CHDB is targeted to this. DUHD stipulates in the ownership book which defines the content of owners’ rights on the housing unit that “an owner of an apartment unit is a person authorized by DUHD to purchase and reside in the unit” (ownership book, 2.c.). Furthermore, because the owner of a unit is also able to resell the unit under the consent of DUHD, CHDB and DUHD explain that the right subject to the sale of a unit constructed by DUHD is “right to live and transfer,” and it seems that the right is legally effective.<sup>47</sup> Even if mortgage loan is provided with setting a mortgage on the right to live and transfer, ownership (the right to live and transfer) is retained by DUHD until payment is completed, and by default DUHD can execute repossession by itself based on the Government Premises Eviction Act, 1955. Therefore there is no particular concern about enforcement of a mortgage.

## (3) Sale of Apartment Units by Private Developers

Regarding sales of condominiums sold by private developers, the right to be subject of sale and mortgage is more uncertain and need to be concerned. When a private developer develops a building on a land owned by another person, the building is constructed based on a contract with the land owner. Based on the concept of immovable property under Myanmar law mentioned before, the completed building seems to belong to the land and to be owned by the land owner.

Although unit ownership is not admitted in Myanmar, according to the contract with the land owner, it is common practice that the land owner owns a part of the right to use space and a private developer owns remaining part of the right (percentage of ownership is based on each individual contract). For that reason, the sale and dealings which private developers do can be said to be transactions of the right to use space. Since the consent of the landowner is required and the seller alone cannot sell and resell the right to use space, this right to use space can be understood as something like “claim” to the land owner, different from unit ownership.

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<sup>46</sup> No information was obtained about “license”.

<sup>47</sup> Because the right to live and transfer is different from unit ownership, the Buyers can only reside and resell only with the permission by DUHD. The owner is restricted to register at MOALI or YCDC as an owner of purchased housing unit.

Although there is no clear legal basis for the right to use space, it is widely practiced to trade the right. It causes a social turmoil if it is concluded that this transaction is legally ineffective, so that it is not reasonable conclusion. Even IRD also deals with purchase and sale of the right to use space as a subject of income tax, and if the facts such as existence of a contract are recognized, it is judged as effective sale and purchase in the court. Therefore it can be handled as a valid transaction in Myanmar law as a trade of the claim based on a contract.<sup>48</sup>

However, when enforcing collateral at the default of the mortgage loan, it is necessary to file a claim at the court each time, and it takes time to finalize the right holder in the hearing, and it is not always possible that the claim is accepted. Hence there is a doubt about the certainty of execution of collaterals. Currently private banks provide housing loans for private sales of apartment units constructed by private developers. Private banks currently take the risk of being unable to enforce collateral at default.

Therefore, if housing finance by ODA is also provided for private housing loans, it is desirable to form a scheme in a way that private banks bear the risk. In addition, if the construction projects of private developers are included in the subject of housing loans, in order to establish the effectiveness of the execution of collaterals, first of all, it is necessary to establish unit ownership in Myanmar law, and it is desirable to establish the right clearly which can be the subject of sale.

#### **4.3.2 Undeveloped Registration System of Mortgage and Issues of Mortgage Enforcement at a Court**

In Japan, it is usual to set a mortgage for sale of a unit ownership as a collateral for a mortgage loan, and to register the mortgage. However, in Myanmar registration system for mortgage is undeveloped. According to Article 17 of the Myanmar Registration Act 1909, a contract document that creates, declares, allocates, restricts or extinguishes a right, title, or interest on a specific real estate, or leases real estate for a period exceeding one year has to be registered at MOALI Office of the Registration of Deeds and Assurances of Settlement and Land Records Department.<sup>49</sup> However in reality registration is not done in many cases in the aim of avoiding tax, etc.. Therefore it is impossible to register mortgage because a subject apartment unit itself is not exactly registered, or unit ownership is not admitted. Therefore, regardless of mortgage loan by CHDB or loans by private banks, mortgage registration is not used and, instead, the method of “mortgage by keeping title deed as collateral” that deposits an ownership book to a bank as a collateral is widely used.

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<sup>48</sup> Because the right to use space is different from unit ownership, the land ownership is not accompanied with the right to use space, and the right holder cannot register at MOALI or YCDC. Also, because resale requires the consent of the landowner, free disposal is not permitted.

<sup>49</sup> Hiroto Inoue, Masanori Ban, “Foundation of Legal System of Real Estate in Asian countries (4),” ARES Journal of Real Estate Securitization,” Vol.12, pp.61-62, [https://www.ares.or.jp/works/pdf/ares\\_12-p60-66.pdf](https://www.ares.or.jp/works/pdf/ares_12-p60-66.pdf), accessed on the 25th, January, 2017.

In the past, “mortgage by keeping title deed as collateral” is a collateral setting method that is admitted only in a specific area including Yangon. However, recently president announcement was issued and now the method is admitted in whole part of Myanmar.<sup>50</sup> In the case that the mortgage is not registered and private banks force enforcement at a court with a reason of the mortgage, validity of sale of apartment unit and mortgage setting is considered through a court hearing on merits, and private banks need to acquire a judgment. This process requires a long period of time and expenses, and these are problematic.<sup>51</sup> In addition, in the case that mortgage is registered, existence of registration becomes a strong evidence at a court hearing in Myanmar. However, a court hearing itself is essential and it is impossible to start enforcement of mortgage immediately.<sup>52</sup> It is necessary to develop legislation concerning the registration system to facilitate mortgage enforcement more smoothly, reliably and in a short time..

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50 Article 58 (f) of the Property Transfer Act of 1882 provides that “residents of Rangoon, Moulmein, Bassein, and Akyab, or residents of other cities designated and publicly notified by the President of Myanmar in the Official Gazette” can set a mortgage.

51 There is no special procedure for litigation concerning real estate, and it proceeds in accordance with ordinary civil executive proceedings. According to a Japanese lawyer familiar with Myanmar law, there is no provisional execution system, and the explanation by a private bank of Myanmar that it could take four to five years in the lawsuit sounds not uncomfortable. Because the defendant (borrower) does not pay legal costs, legal costs is also a matter.

52 For example, in Japan, if mortgage is registered, it is not necessary to acquire a judgment by a court, and the court immediately takes the procedure of mortgage enforcement as soon as a plaintiff submits a certificate of mortgage registration.

## **Chapter 5      DEMAND SURVEY FOR HOUSING LOANS**

### **5.1   Outline of the survey**

In order to grasp the demand for the housing and housing finance which will be the final borrower, 2,000 households will be surveyed about the situation of existing houses, future home purchasing needs, and the possibility of using housing finance.

#### **5.1.1      Objective of the survey**

- In order to select cities where possibility of housing supply utilizing the housing finance system will actually considered in the future, in consideration of the population of the major cities of Myanmar and the size of the economy, demand survey of about 2,000households was conducted as candidate cities of Yangon, Mandalay and Bago which are the top three urban population cities by the census2014.
- Survey volumes among the cities were set up with a focus on Yangon, Mandalay and Bago as a supplementary survey target, considering the number of households, household movements, current housing environment, etc.,. Consulted with the counterparts, 1,200households in Yangon, 400households each in Mandalay and Bago 400.
- The surveyed subjects should be targeted to those who "can buy houses (including possibilities in the future)" and "is difficult to purchase houses by themselves so funds procurement is necessary ". Therefore, the low middle income group of the supposed purchasing layer (household income 0.3 - 0.5 Million MMK) for target buyers of Low Cost housing supplied by DUHD and the assumed purchasing layer of affordable housing (household income 0.5 - 1.0 Million MMK) was set as the main target of the survey. For targets in Yangon, we decided to extract those who conformed to the above conditions from the results of the survey of households visiting about 10,000 votes, which was conducted in the previous year's JICA Survey work, "The Project for the Strategic Urban Development Plan of the Greater Yangon".
- In Mandalay and Bago, to extract the survey targets, interviews were set with the officials of each town ship office, and survey was conducted with the supporting letters from MOC.
- In implementing the survey, the work was re-entrusted to a local consultant based in Myanmar local area and carried out a survey by direct interview.

#### **5.1.2      Method of the survey**

- In implementing the survey, the work was re-entrusted to a local consultant based in Myanmar local



area and carried out a survey by direct interview.

### 5.1.3 Survey items

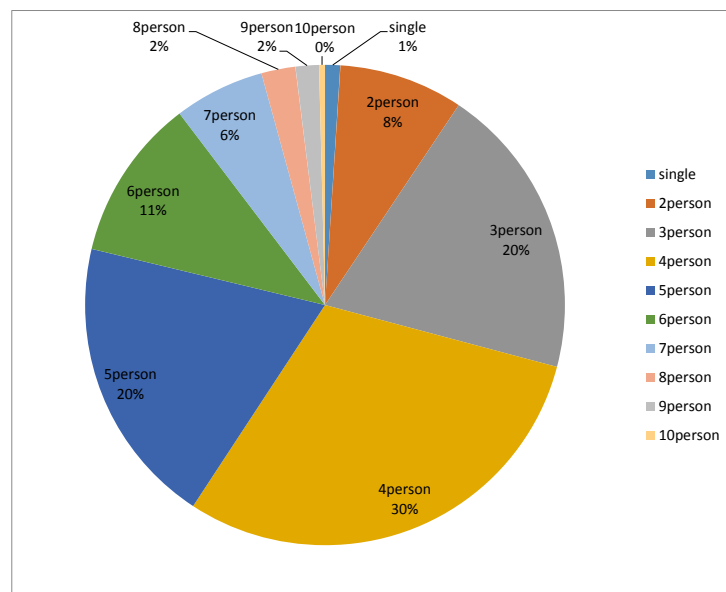
- Survey items were prepared in consultation with MOC, YCDC, JICA, JHF, and local consultants. Main questions will be about (1) household member information, (2) household income situation (past 3 years), (3) expenditure status, (4) existing debt situation, (5) current housing environment, (6) existence of account, (7) hope for future home purchase, and so on.

## 5.2 Survey Results

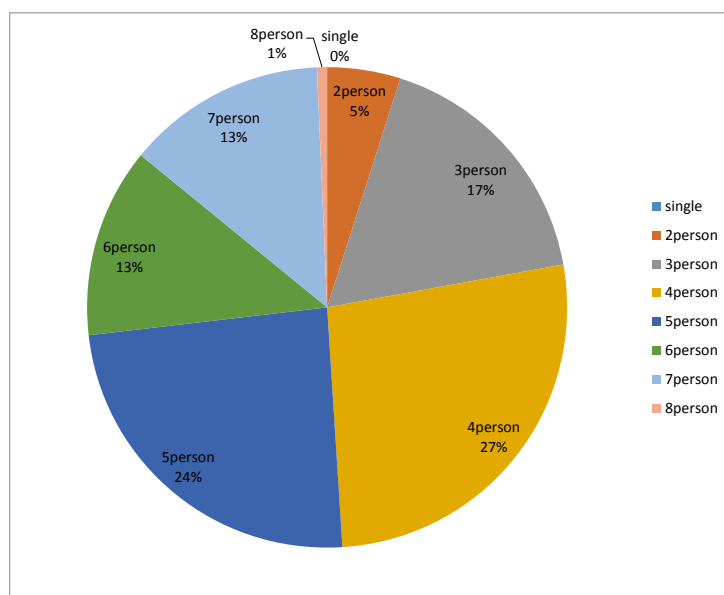
### 5.2.1 Characteristics of the interviewee

#### Household

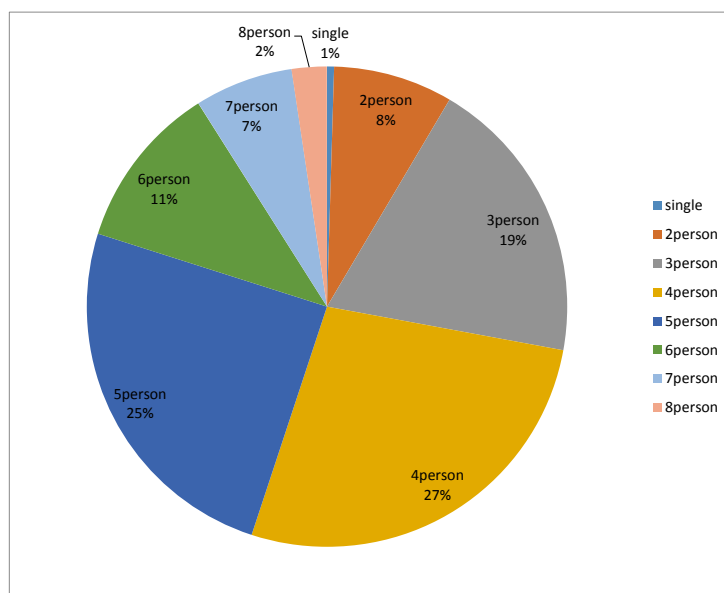
- Small households (single to 2 households) are less than 10% in either city. Meanwhile, the proportion of households with five or more people is high, 41% in Yangon, 51% in Mandalay, and 47% in Bago
- The average number of households is 4.39 Yangon / household, 4.66 Mandalay / household, 4.53 Bago / households



**Figure 5-1 Household member (Yangon)**



**Figure 5-2 Household member (Mandalay)**



**Figure 5-3 Household member (Bago)**

#### Household head's gender / age

- The household head is about 52 to 55 years of age, about 80% of the households are male heads of households, the female head of household is slightly older than the male head of household

#### Yangon

	Household		Household			age		age
total	1277	male	980	77%	total	55.64	male	54.59
		female	297	23%			female	59.81

## Mandalay

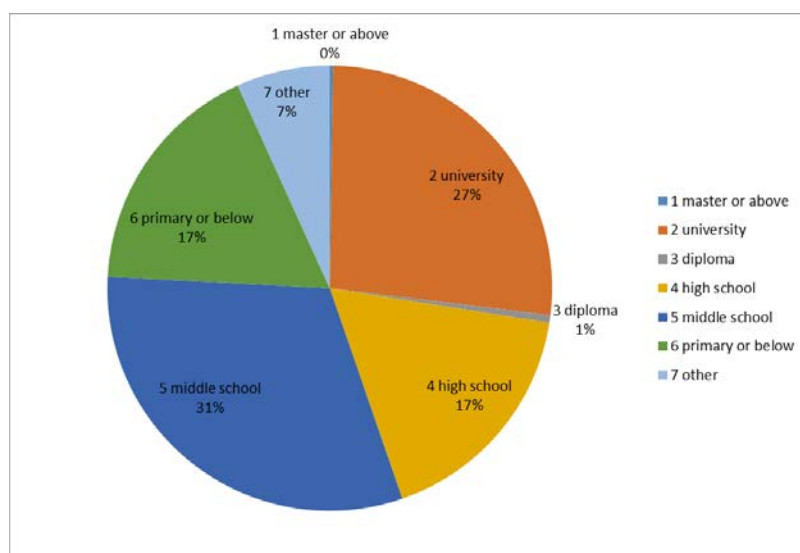
【Householder's Sex】				【Average age of the Householder】			
	Household		Household		age		age
total	447	male	365	82%	total	52.26	50.61
		female	82	18%			59.61

## Bago

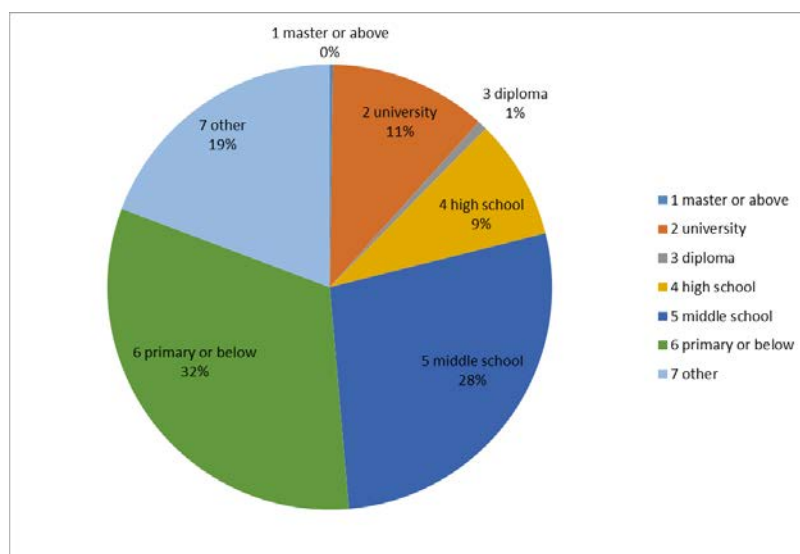
【Householder's Sex】				【Average age of the Householder】			
	Household		Household		age		age
total	436	male	339	78%	total	53.41	51.39
		female	97	22%			60.58

### Educational level of household head · Occupation etc.

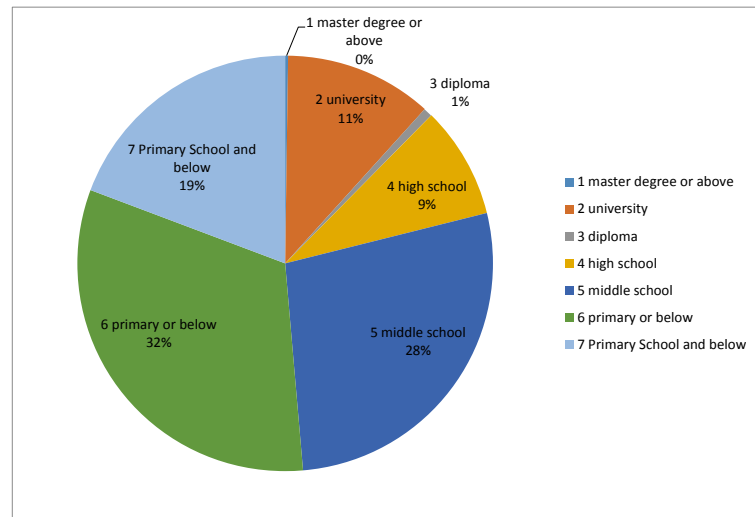
- Bachelor's degree is 27% in Yangon, 10% in Mandalay, 11% in Bago, and Yangon is a relatively high educational trend unlike the other 2 cities
- Headhunter's occupation varies, but Yangon 49%, Mandalay 53%, Bago 44% and self-employed ratio is high



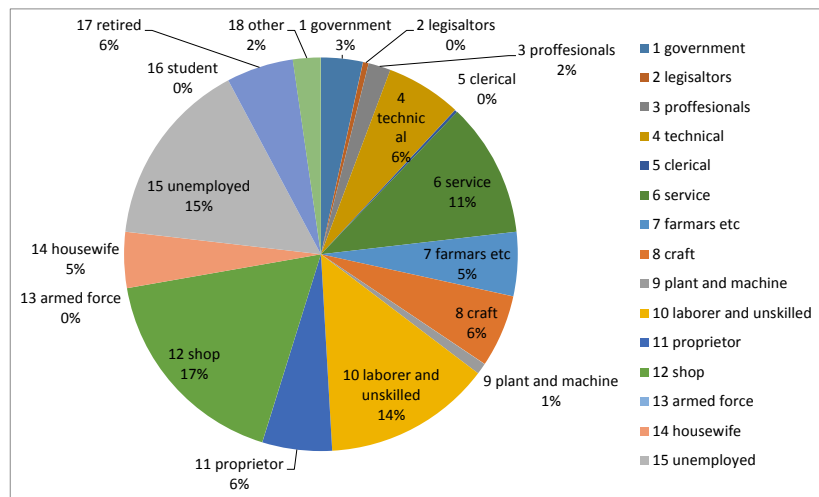
**Figure 5-4 Household heads Education level (Yangon)**



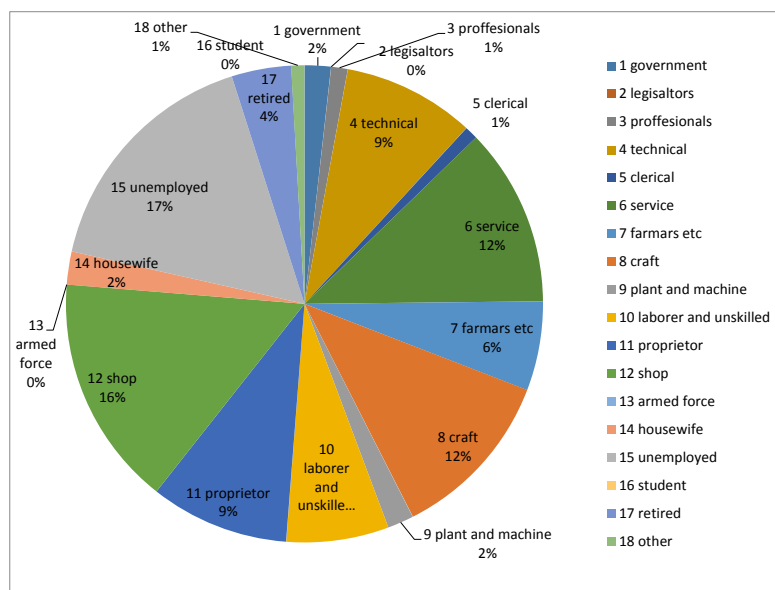
**Figure 5-5 Household heads Education level (Mandalay)**



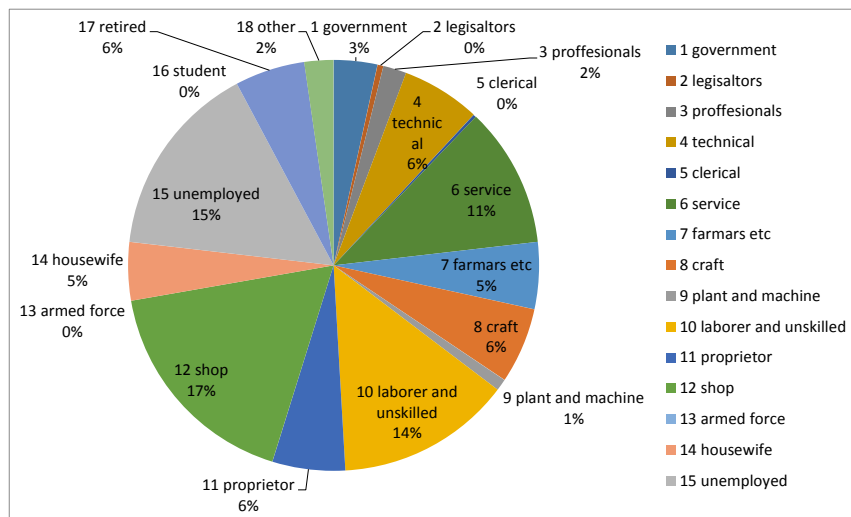
**Figure 5-6 Household heads Education level (Bago)**



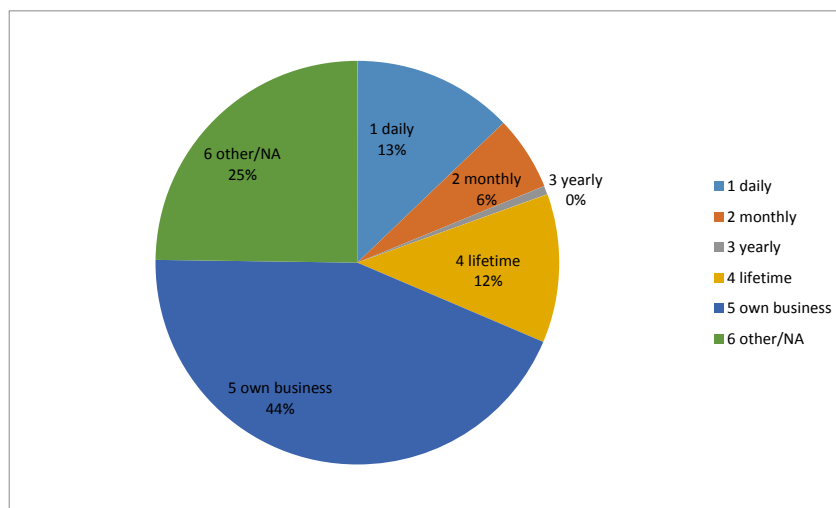
**Figure 5-7 Household heads Occupation (Yangon)**



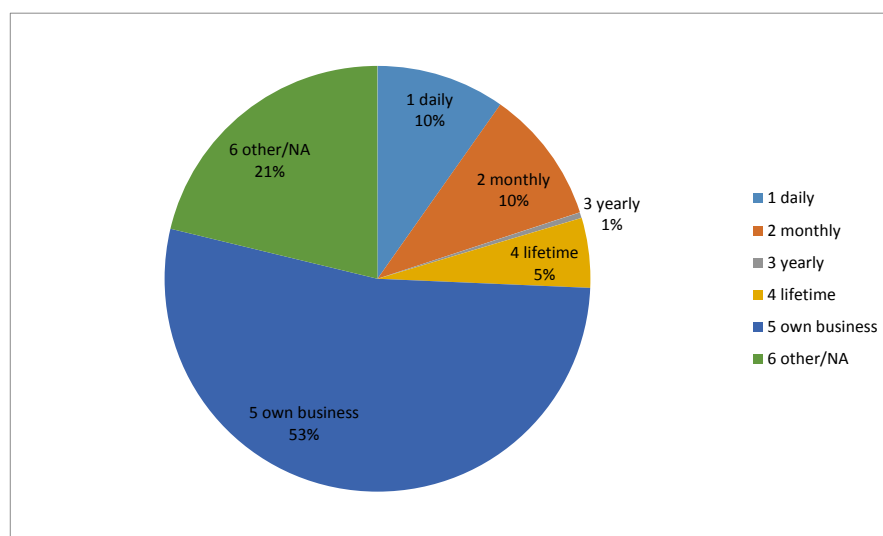
**Figure 5-8 Household heads Occupation (Mandalay)**



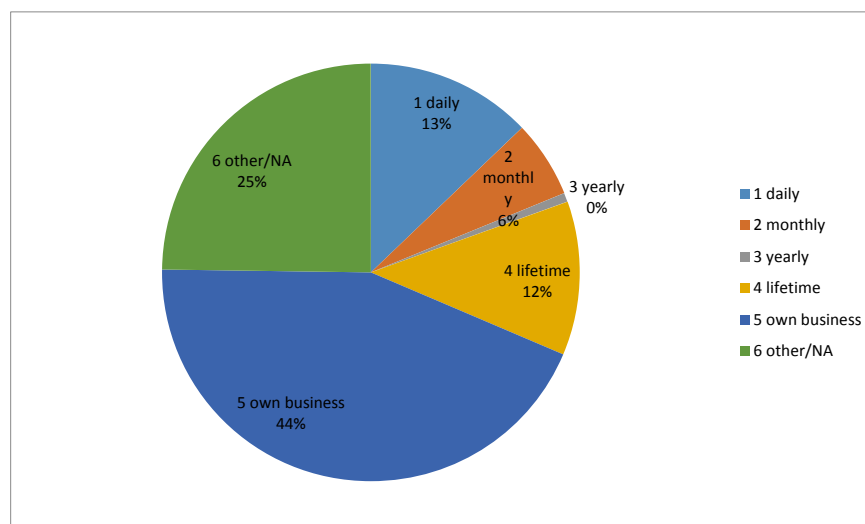
**Figure 5-9 Household heads Occupation (Bago)**



**Figure 5-10 Household heads Occupation condition (Yangon)**



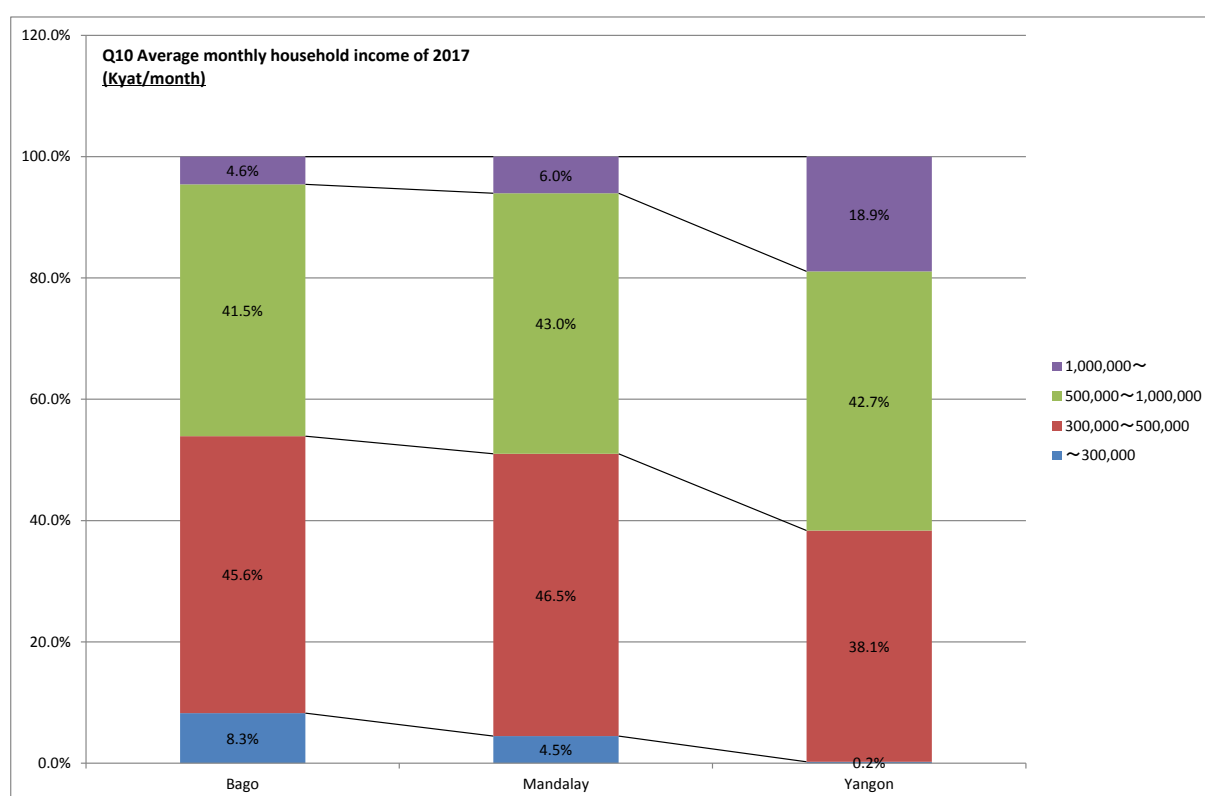
**Figure 5-11 Household heads Occupation condition (Mandalay)**



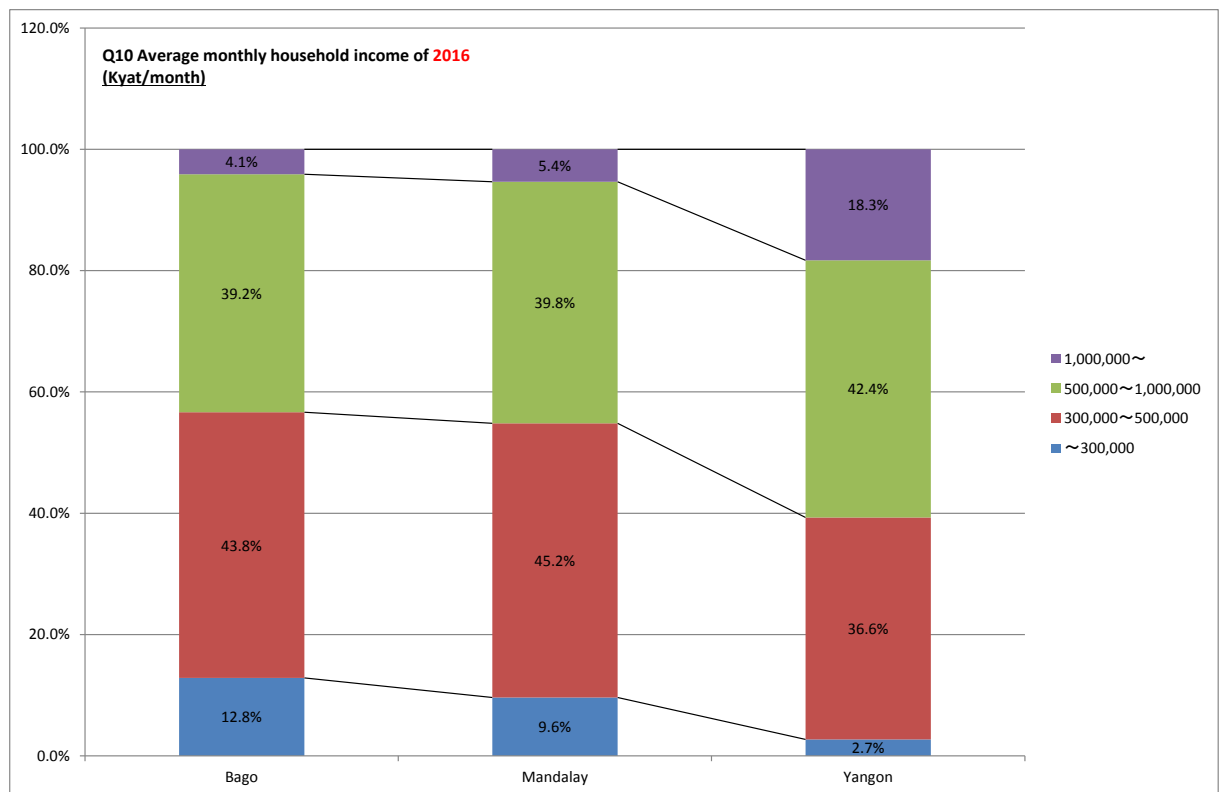
**Figure 5-12 Household heads Occupation condition (Bago)**

### 5.2.2 Household income and expenditure

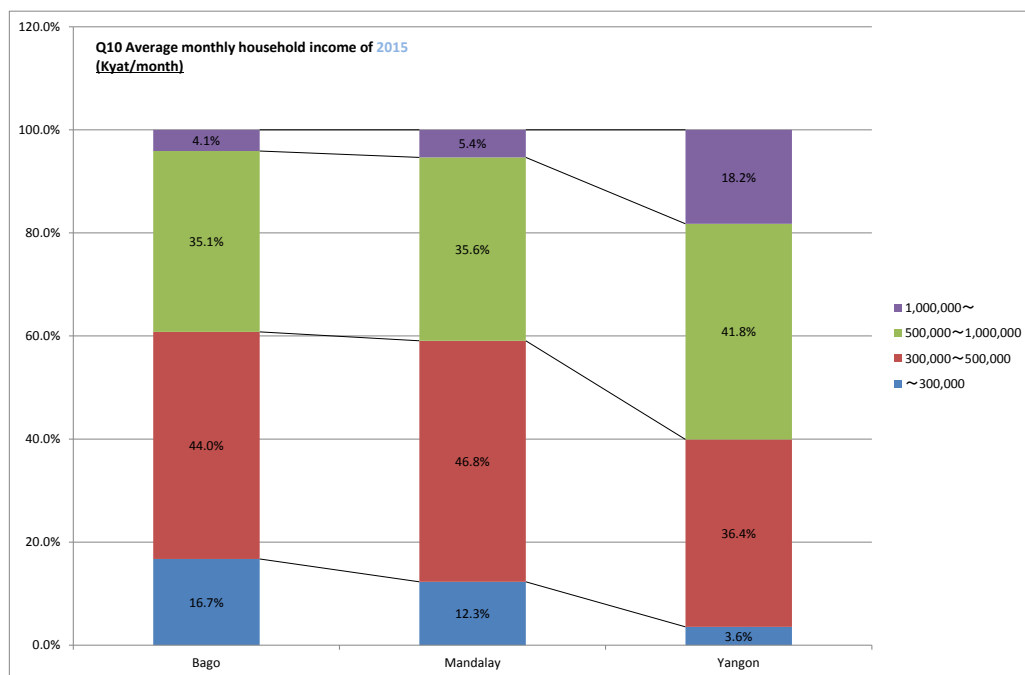
- The subjects of this survey are generally households with a monthly income of 300,000 MMK or more, and the monthly household income is gradually rising in the three years from 2015 to 2017



**Figure 5-13 Monthly household income (2017 )**

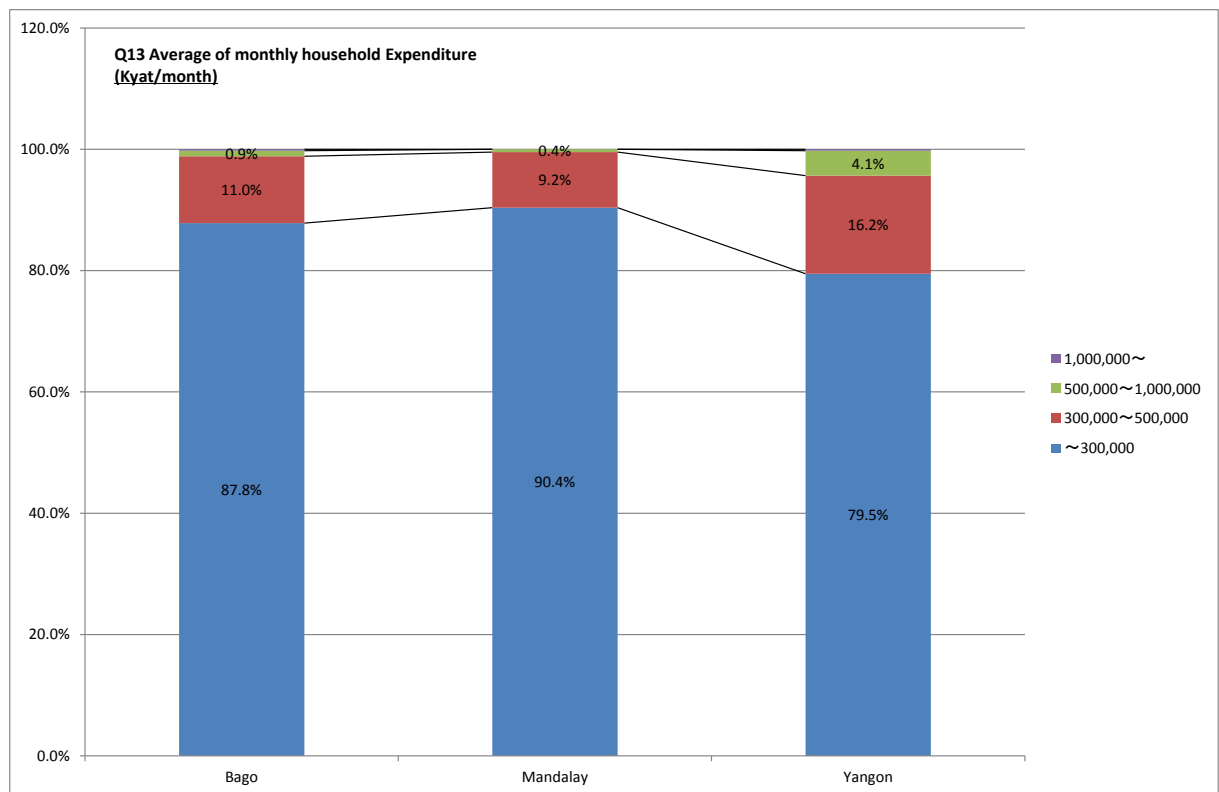


**Figure 5-14 Monthly household income (2016)**



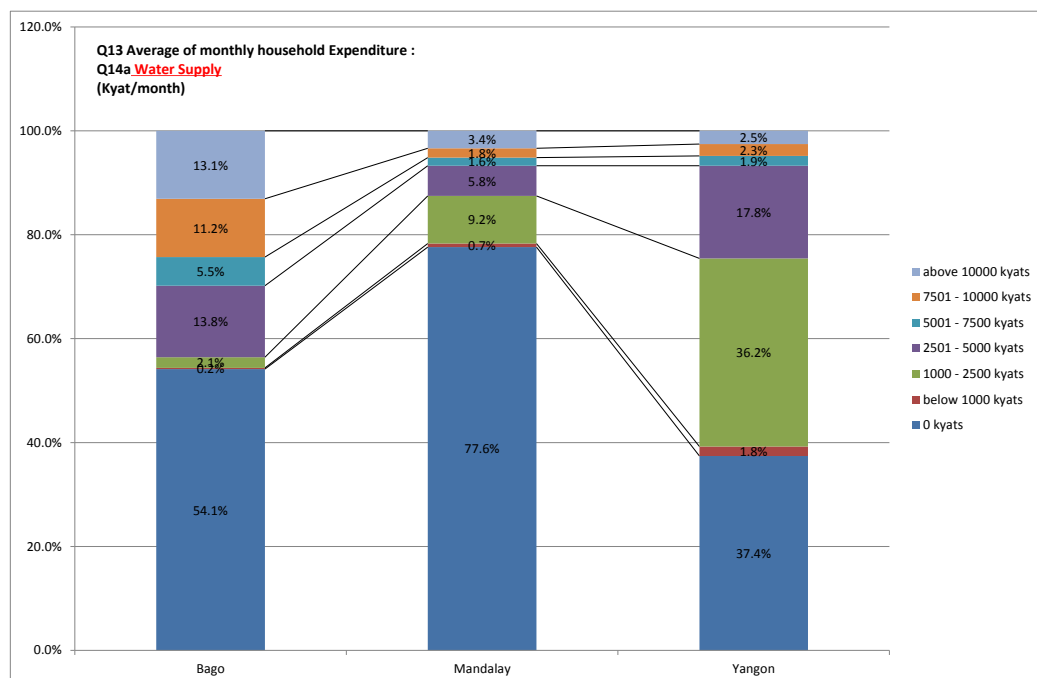
**Figure 5-15 Monthly household income (2015)**

- The subjects of this survey are generally households with a monthly income of 300,000 MMK or more, but household expenditure is mostly 300,000 MMK or less a month



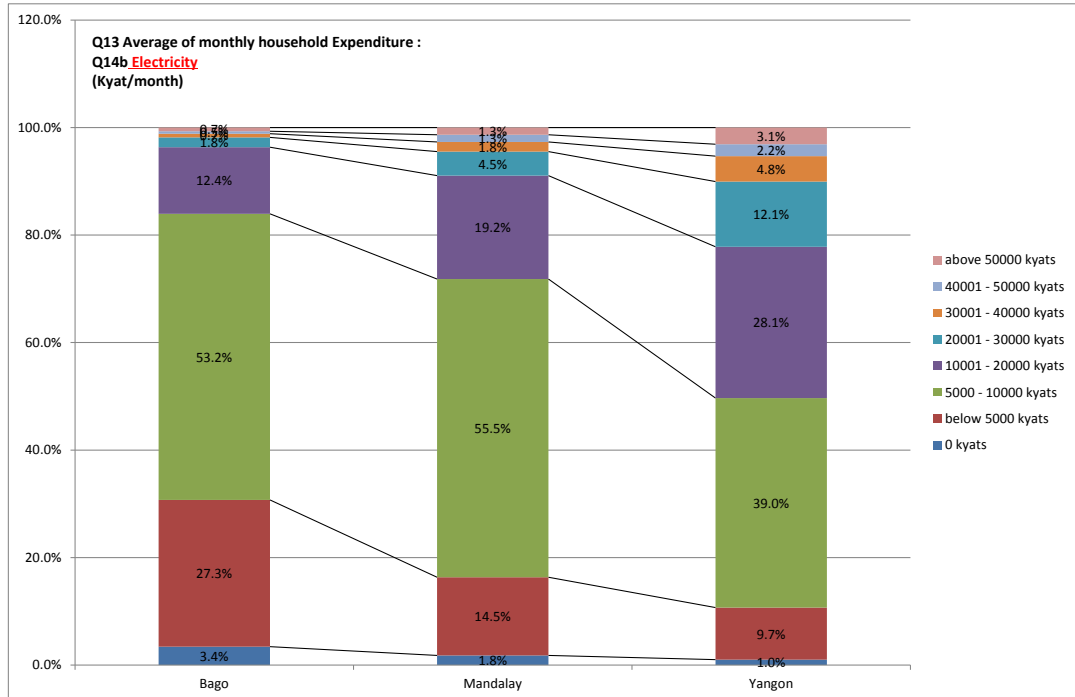
**Figure 5-16 Monthly household expenditure**

- Among household expenditure, it can be seen that the share of electricity bill is large. On the other hand, households with relatively low expenditure on water bills and without payment still exist to a certain extent



**Figure 5-17 Monthly household expenditure (Water supply)**

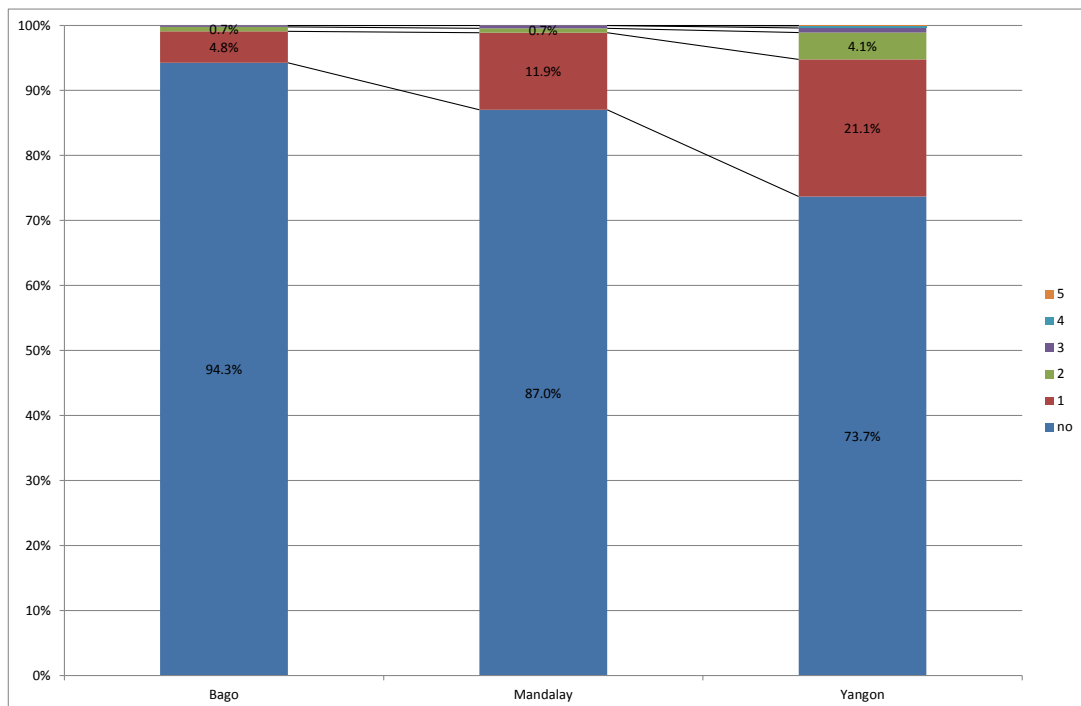




**Figure 5-18 Monthly household expenditure (Electricity)**

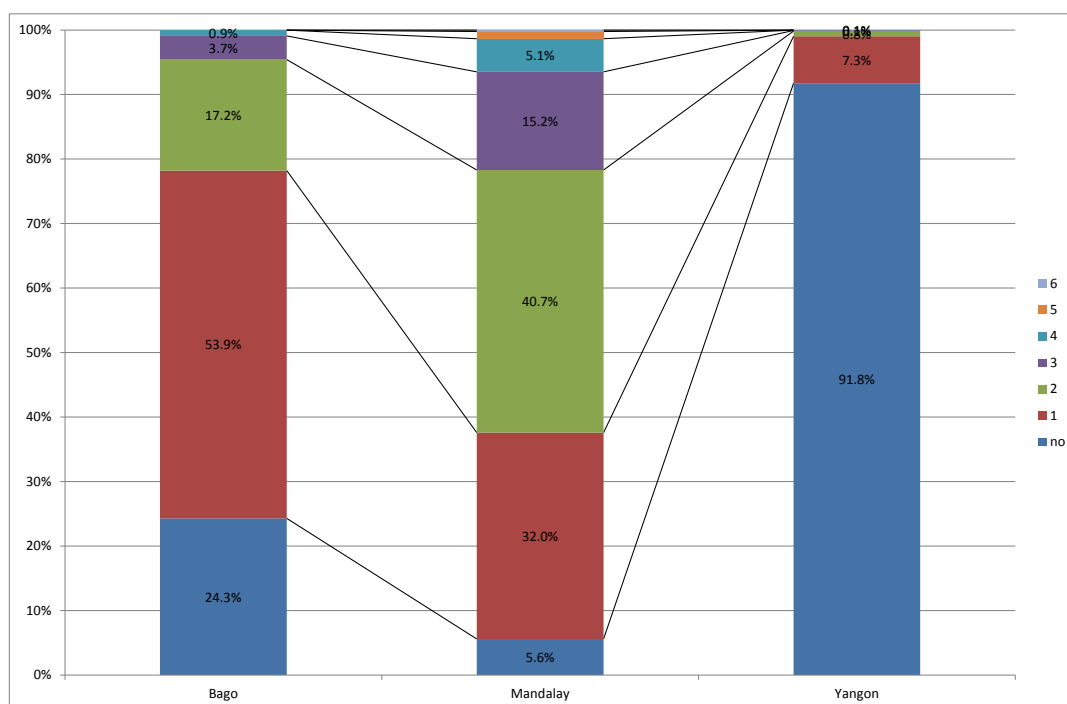
#### Car and motorcycle ownership

- Households that own cars are 19.3% overall. In Yangon alone, it is 26.3%, and in Yangon there are few possession of multiple units



**Figure 5-19 Car ownership**

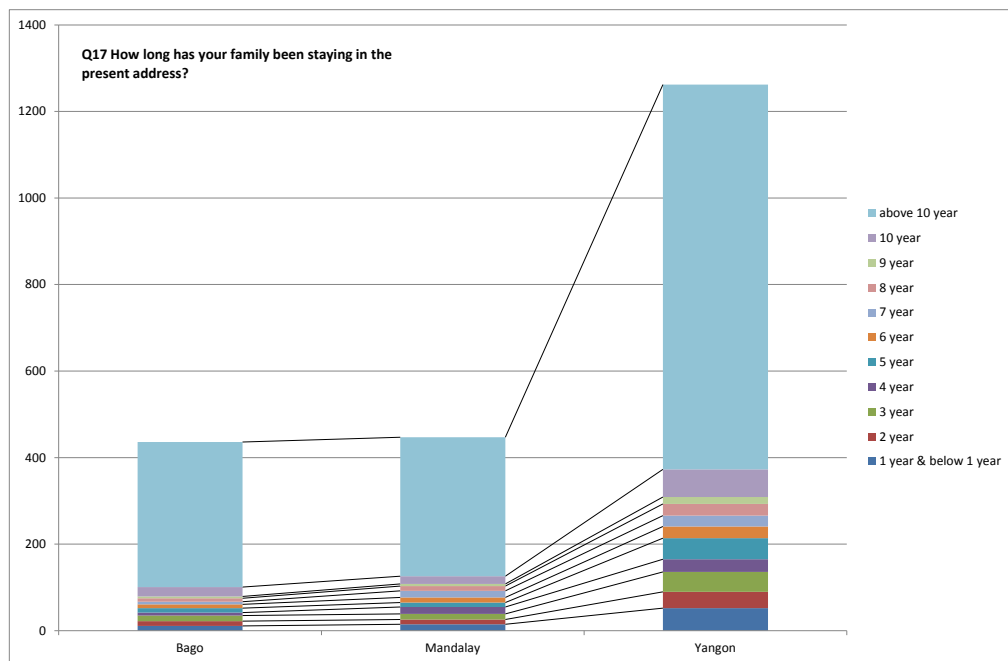
- In Mandalay and Bago, households that own motorcycles are around 90%. In Yangon with motorcycle regulation, only 8.2% of households owned are characteristic, compared with other cities



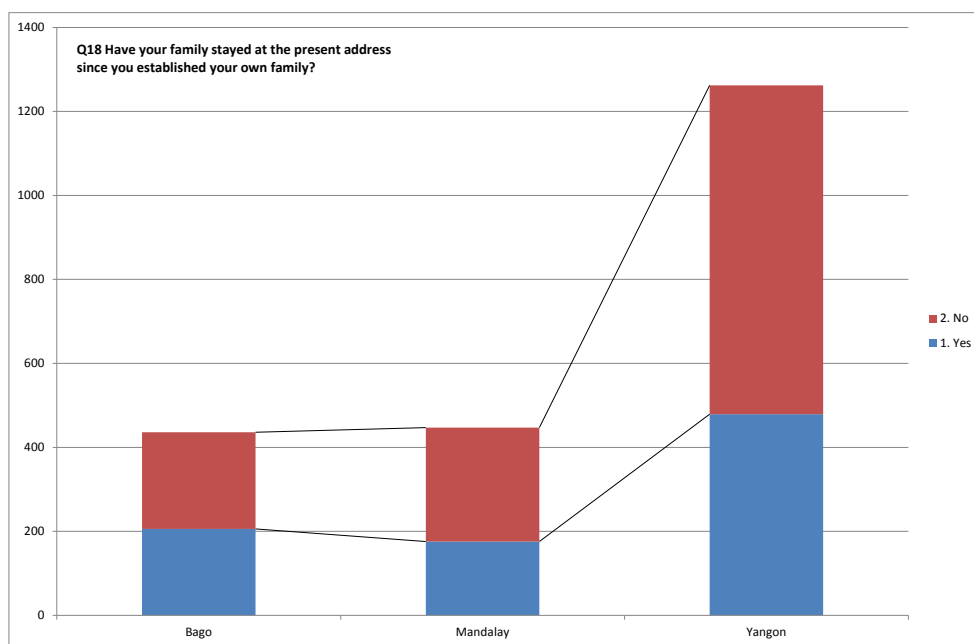
**Figure 5-20 Motorcycle ownership**

### 5.2.3 Present residence

- Every city has a high percentage of residing in the present residence for more than 10 years (however, changes in household composition such as rebuilding etc. and marriage are unknown). About half of the current residents (from the time of making households) have been moved since the time they made up their present households, and when they moved, they stayed in the same metropolitan area
- Many of the reasons for moving to the current residential area are "high convenience", "convenient for work", "have new households" are many, "new households=married" is lower in Yangon than other cities.



**Figure 5-21 The number of years of residence of the current house**



**Figure 5-22 After composing household, living in the current residence**

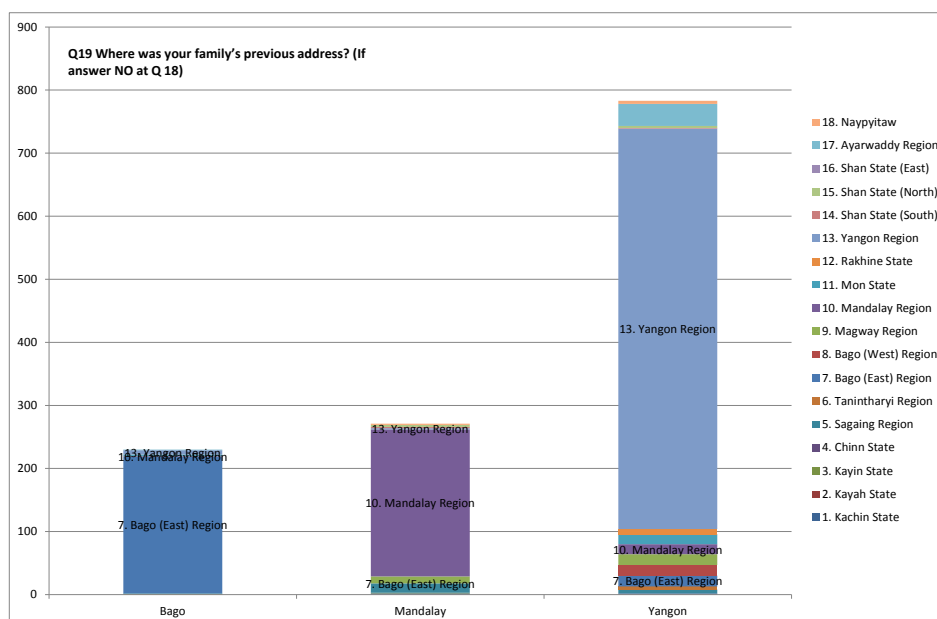


Figure 5-23 Previous residence when moved after composing household

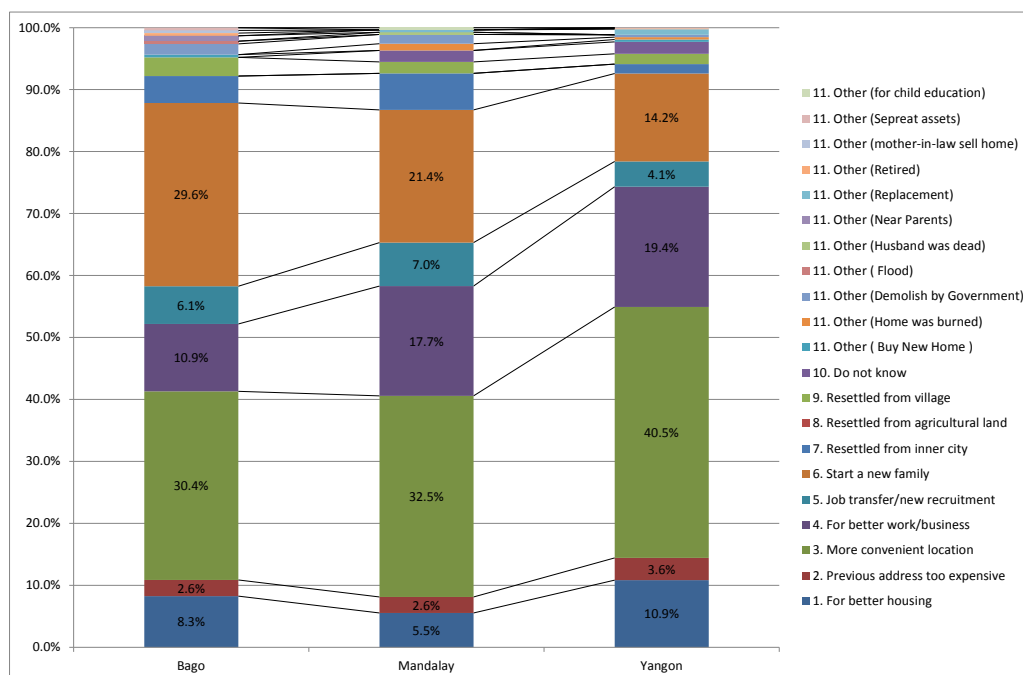
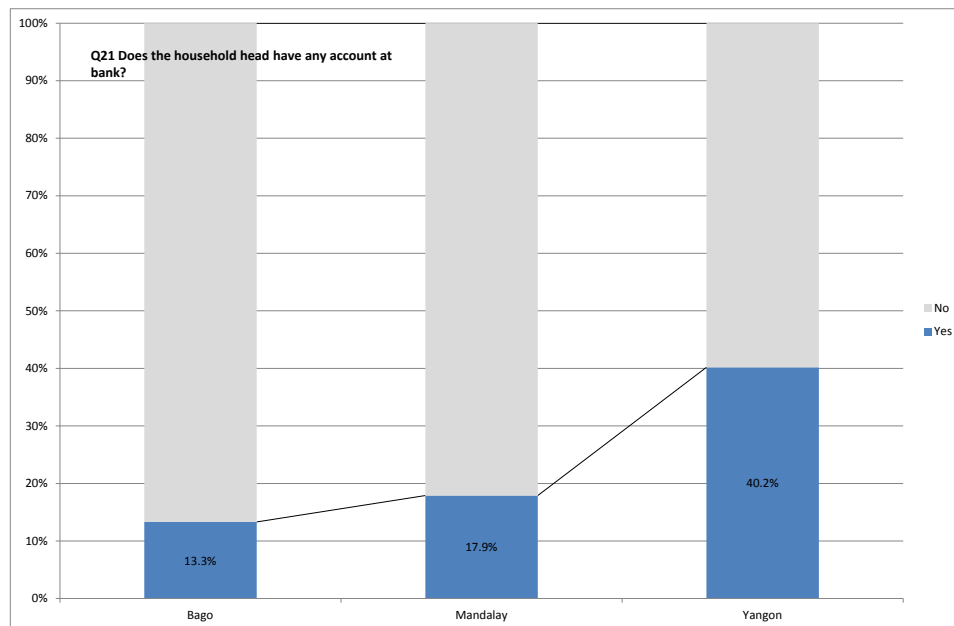


Figure 5-24 reason of moving

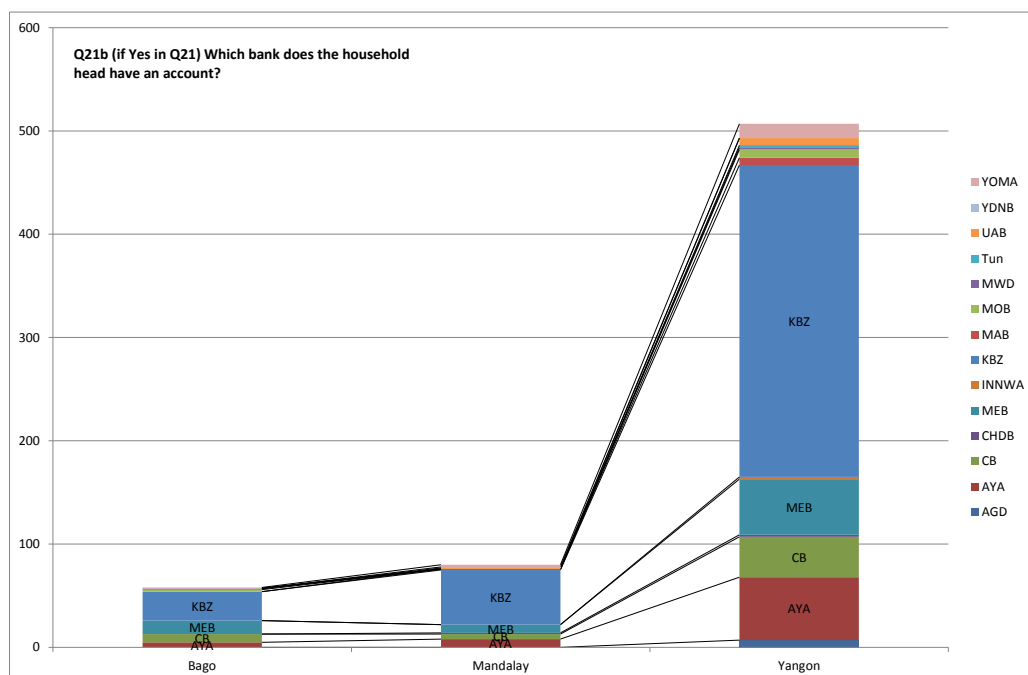
## 5.2.4 Funding for housing acquisition

### Bank account

- Households with accounts as a whole are 30.1%. About 40% of Yangon is reached, but in other cities it is 10%. Banks with accounts are various, the main four banks in Yangon are KBZ, MEB, AYA, and CB.



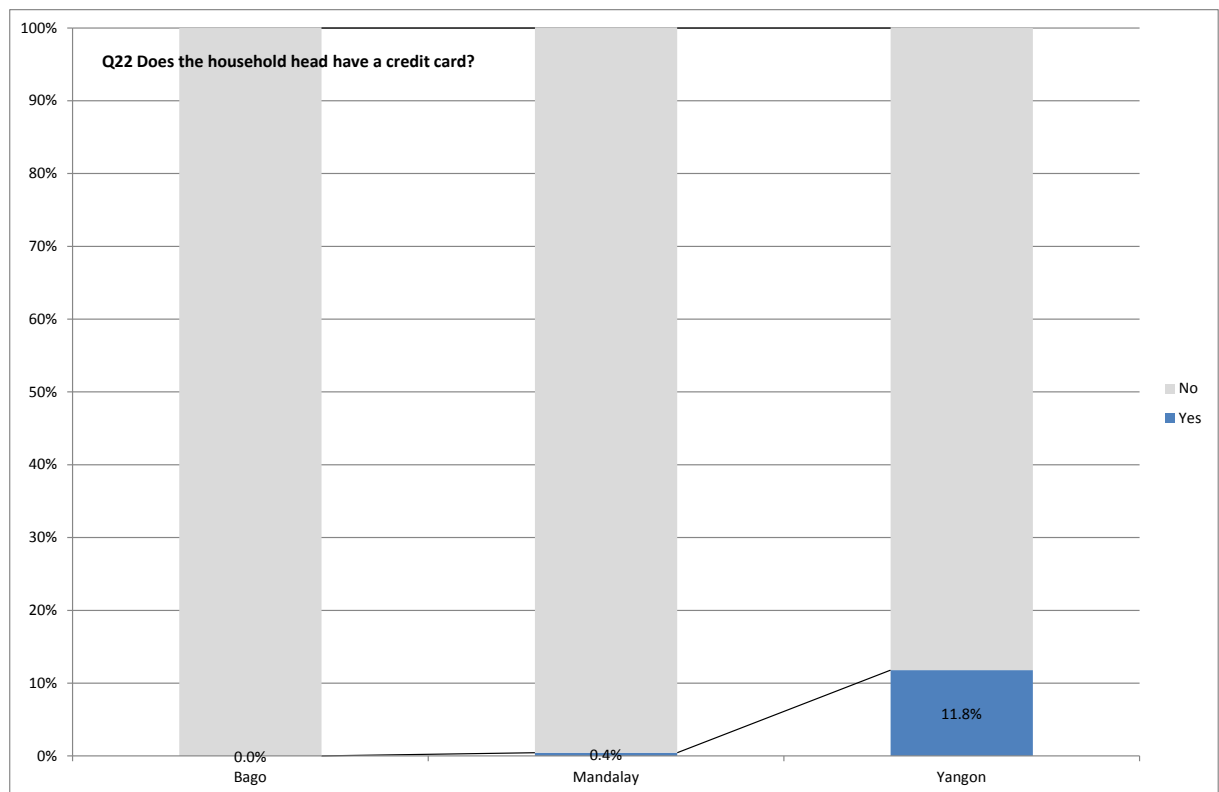
**Figure 5-25 Bank account**



**Figure 5-26 Bank which have an account**

### Holding rate of credit card

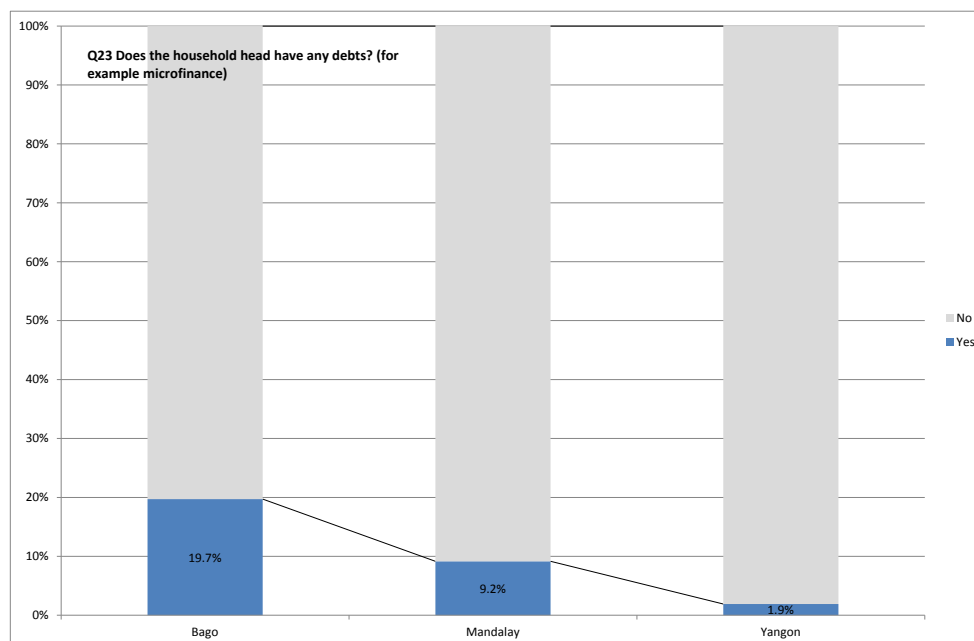
- Credit cards have not progressed, the holding rate is about 11.8% in Yangon, Mandalay, Bago is nearly 0.



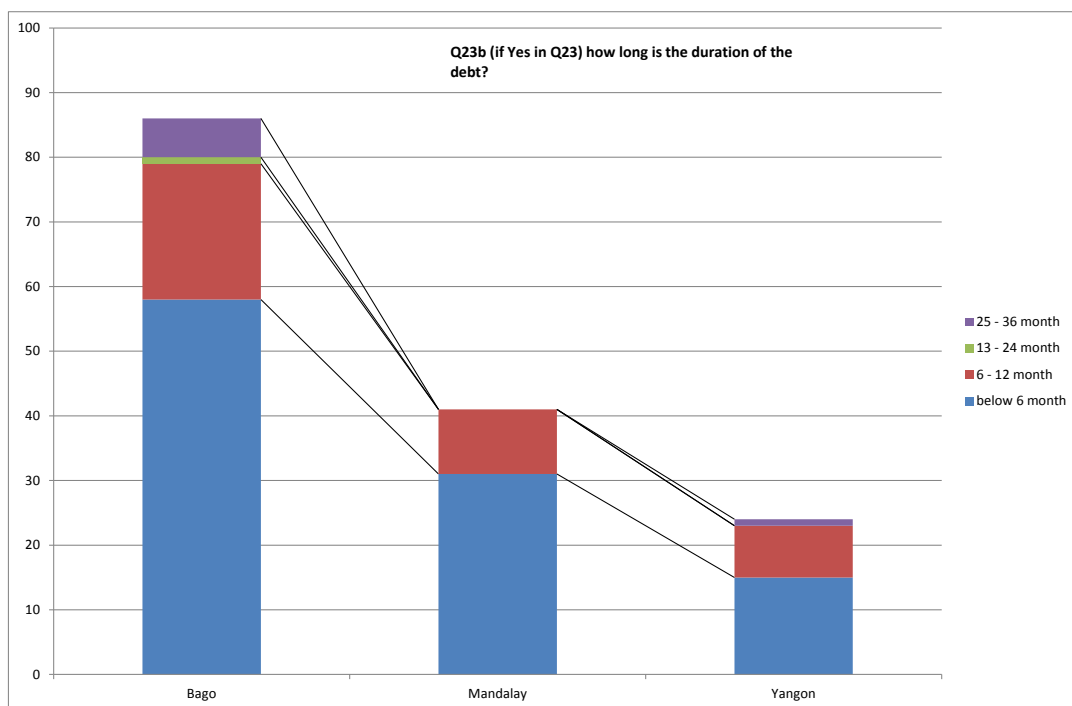
**Figure 5-27 Holding rate of credit card**

#### Status of Household Borrowing

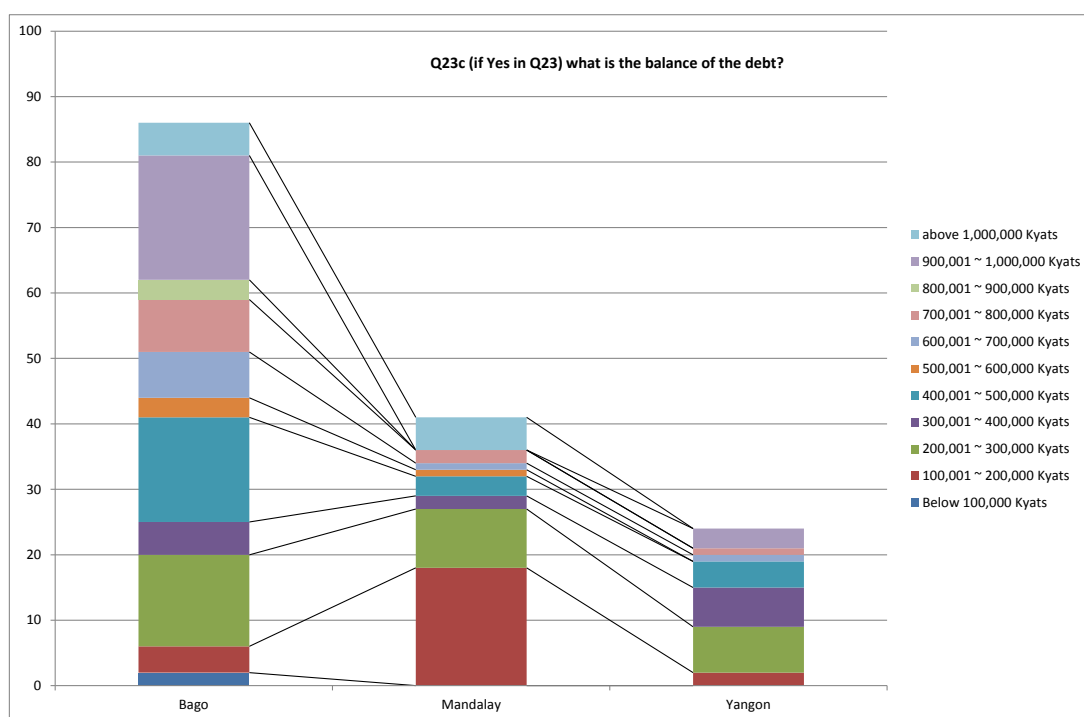
- There are few households with borrowing, but Yangon tends to be even smaller than other cities, and repayment period is mostly less than 1 year.
- Borrowing amount varies, but borrowing within 500,000 MMK is about 80% in Yangon / Mandalay, about half in Bago (Bago tends to have more borrowing than other cities)



**Figure 5-28 Presence / absence of borrowing**



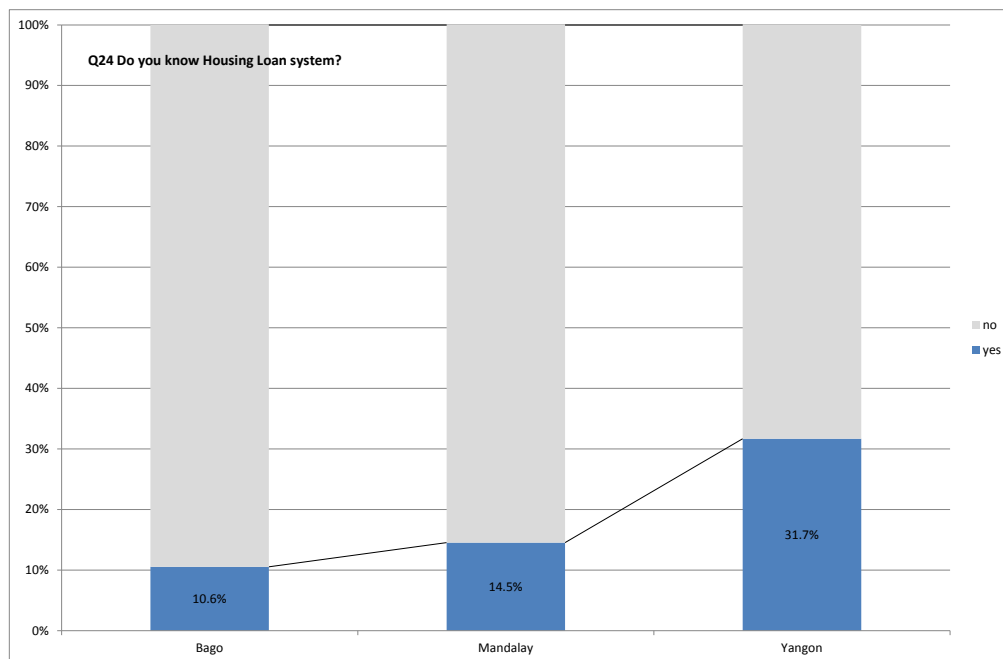
**Figure 5-29 Borrowing period**



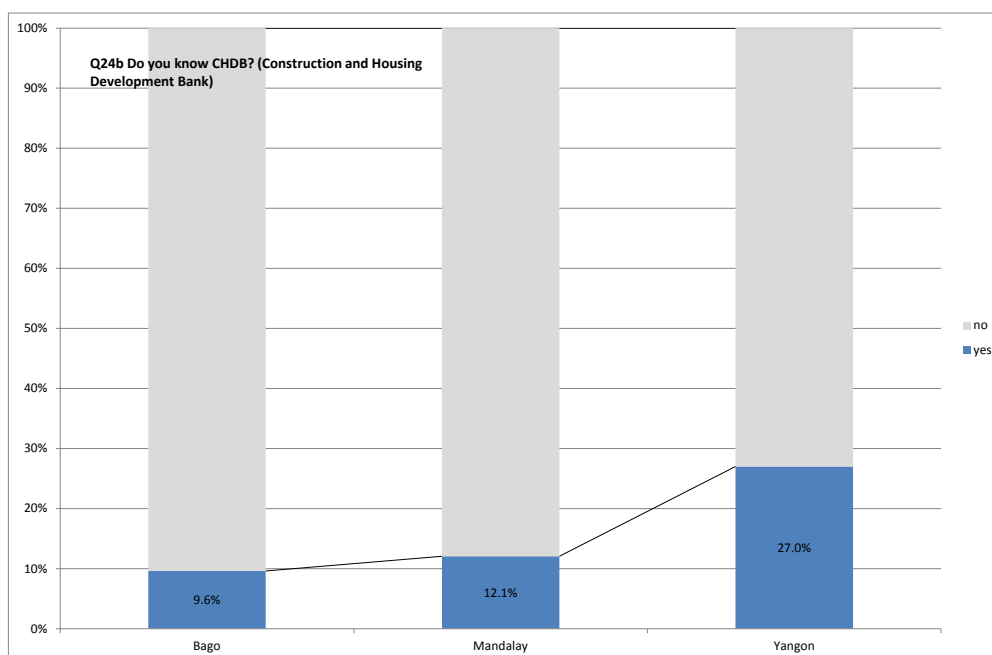
**Figure 5-30 Borrowing amount**

### Awareness of housing loans

- Housing loan awareness is low overall (23.8% overall). Even relatively high Yangon is about 30%.



**Figure 5-31 Awareness of housing loans**



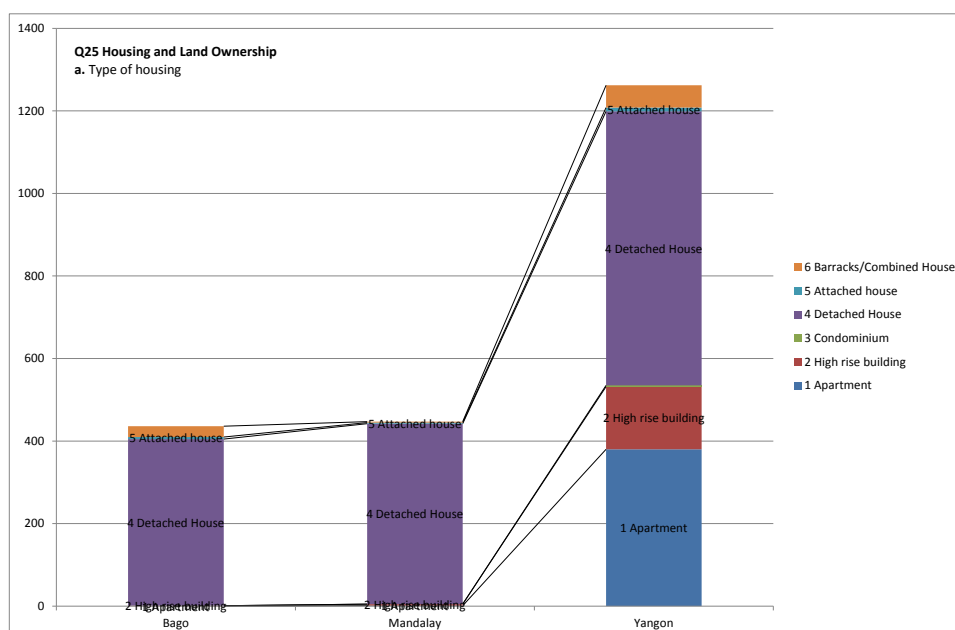
**Figure 5-32 Awareness of CHDB**

### 5.2.5 Status of residential housing

#### Main materials etc.

- The shape of the house is characterized by each region, detached housing are major in Mandalay and Bago, and in Yangon, there are a certain number of condominiums and apartments / flat.

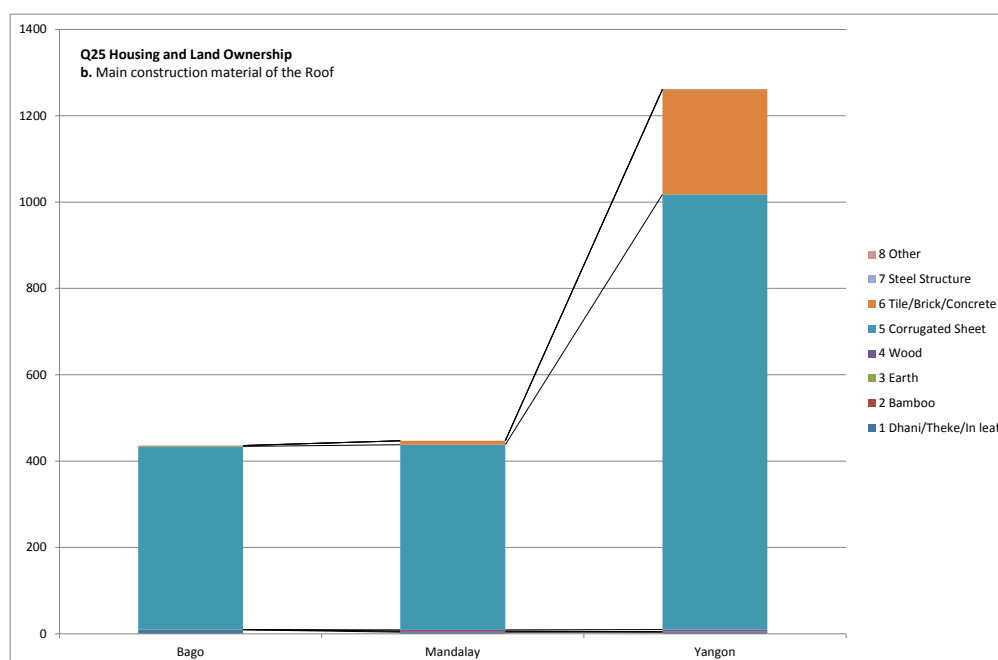




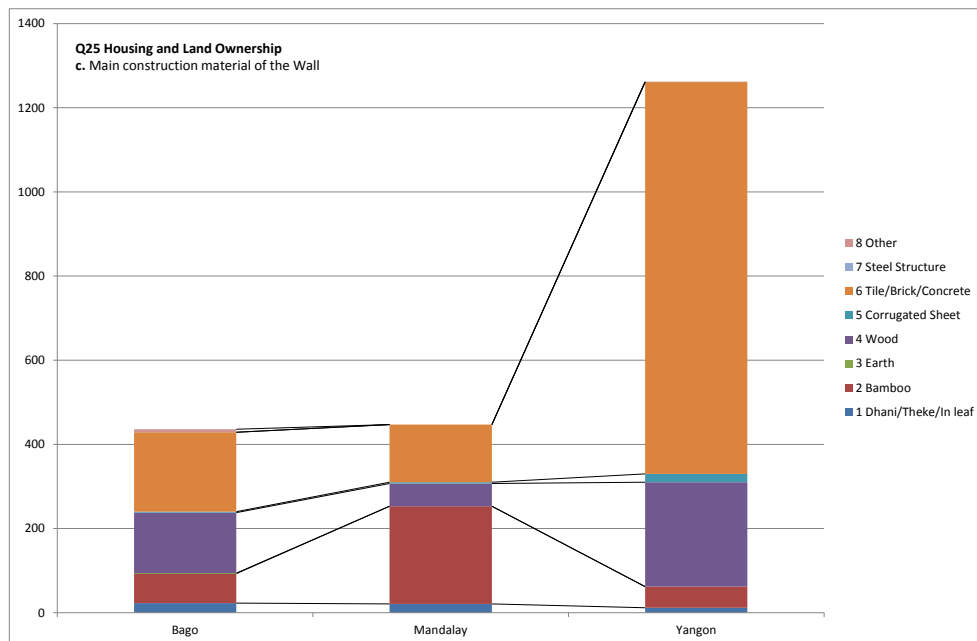
**Figure 5-33 type of housing**

The roofing material is centered on the corrugated sheet; Yangon is about 80%, occupying almost all Mandalay and Bago.

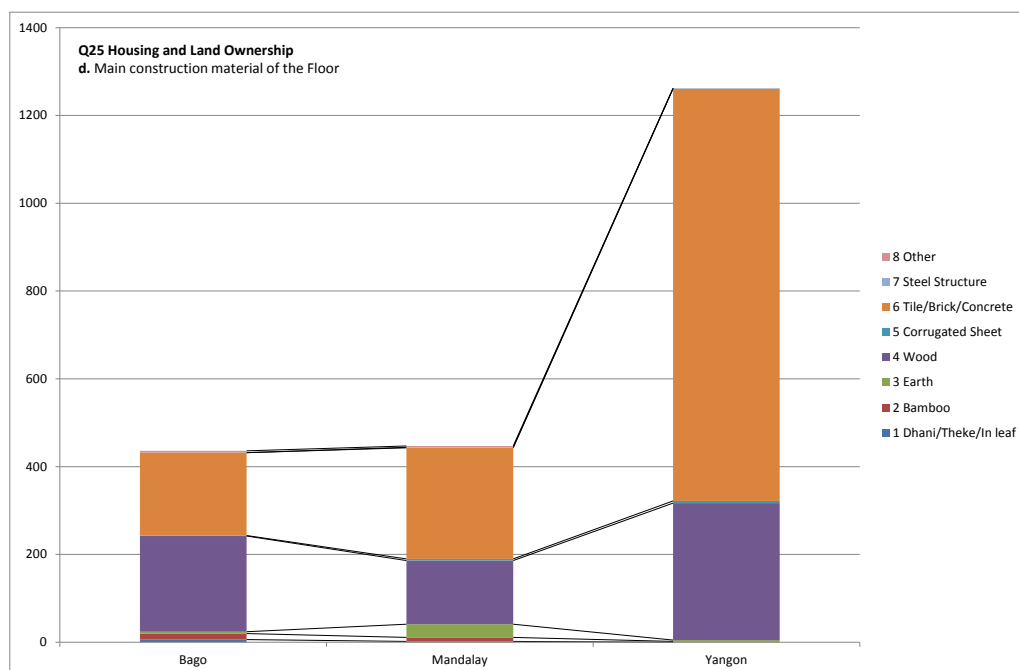
- For wall materials in Yangon, tiles / brick / concrete is about 70%. Bago and Mandalay are not proliferating, and the proportion of bamboo and wood is high.
- For flooring materials are woody or tile / brick / concrete.
- Regarding the structure, the ratio of permanent / semi-permanent in Yangon is high, and about maintenance status is more than half in Yangon, relatively few in Bago and Mandalay for maintenance situation.



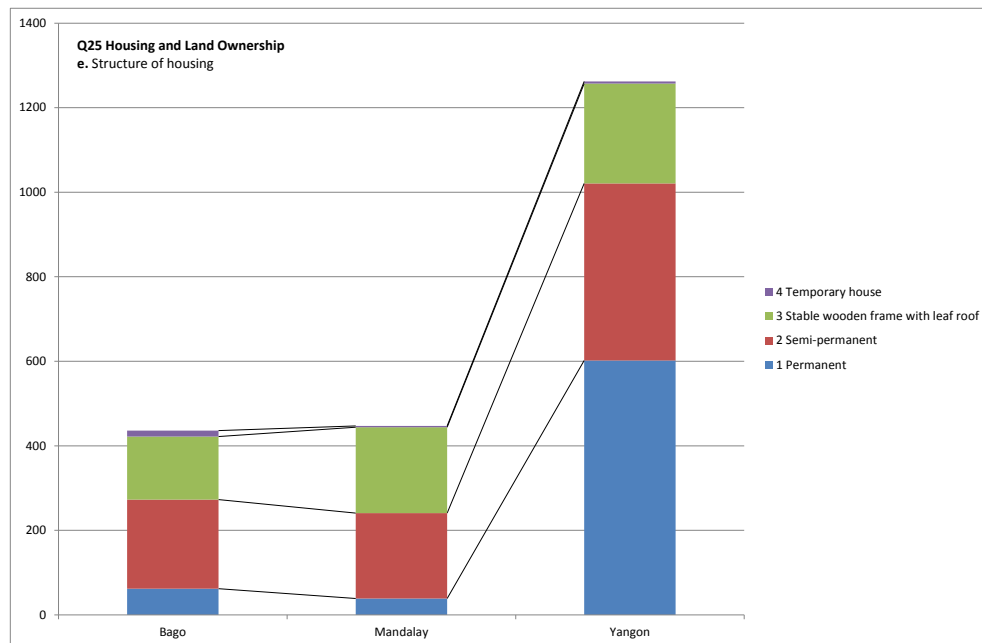
**Figure 5-34 Main material of the roof**



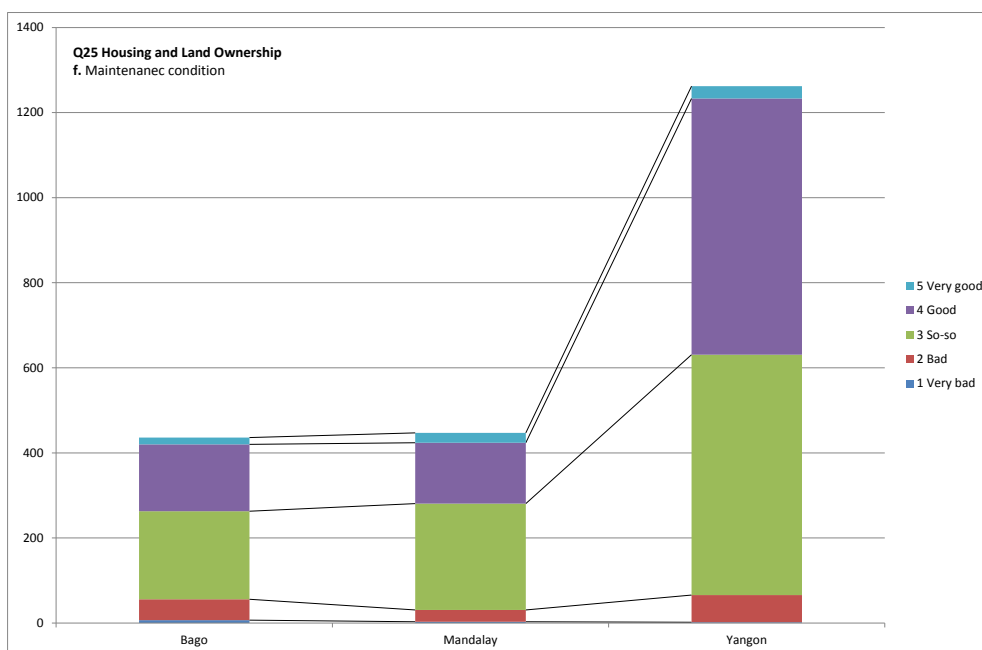
**Figure 5-35 Main material of the wall**



**Figure 5-36 Main material of the floor**



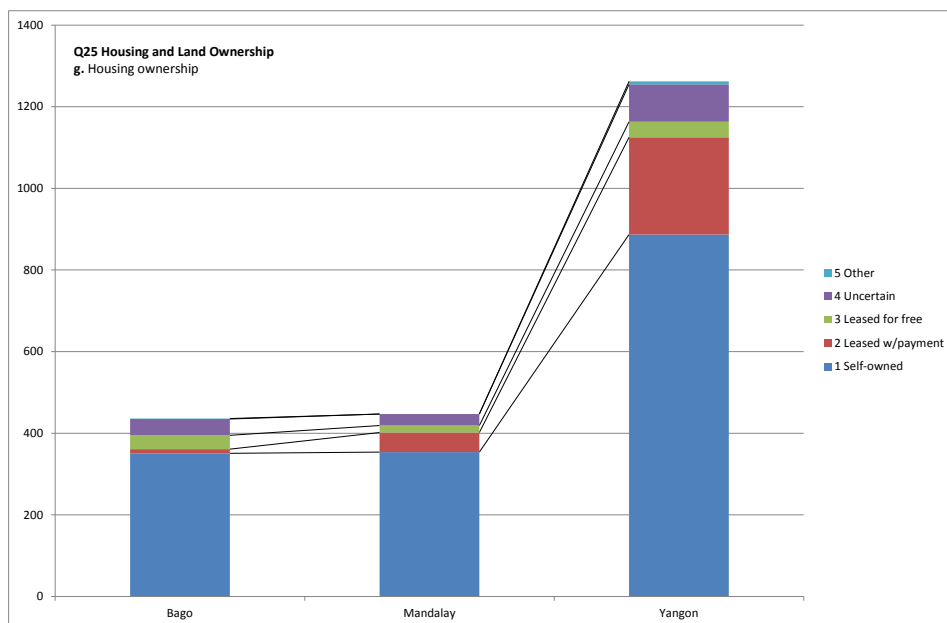
**Figure 5-37 Structure of housing**



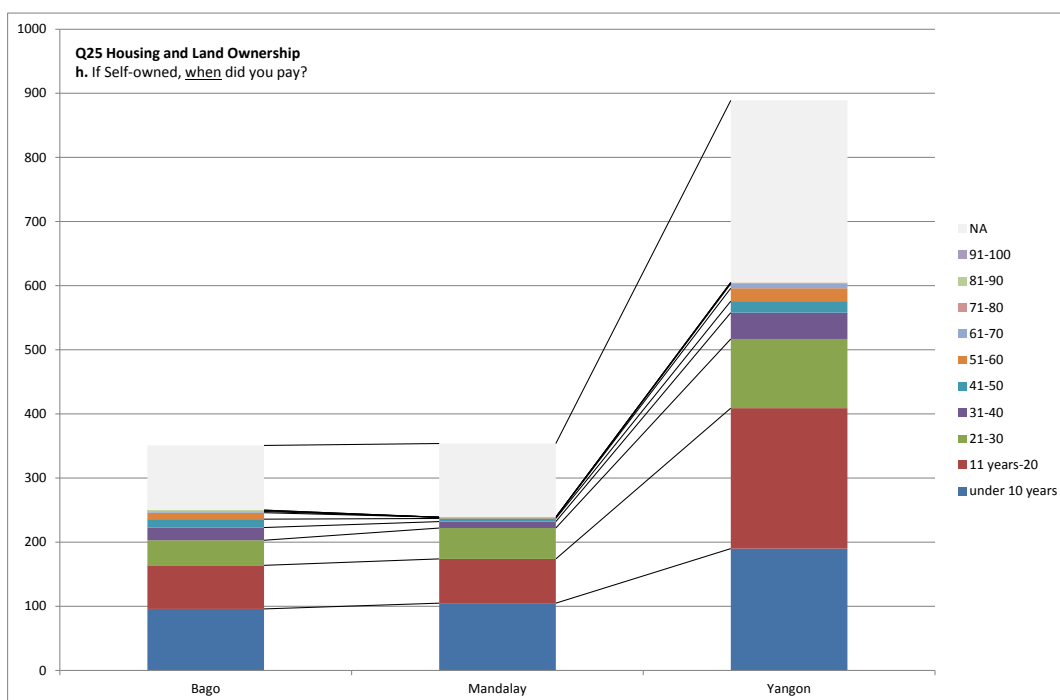
**Figure 5-38 Maintenance condition**

### Housing and Land Ownership

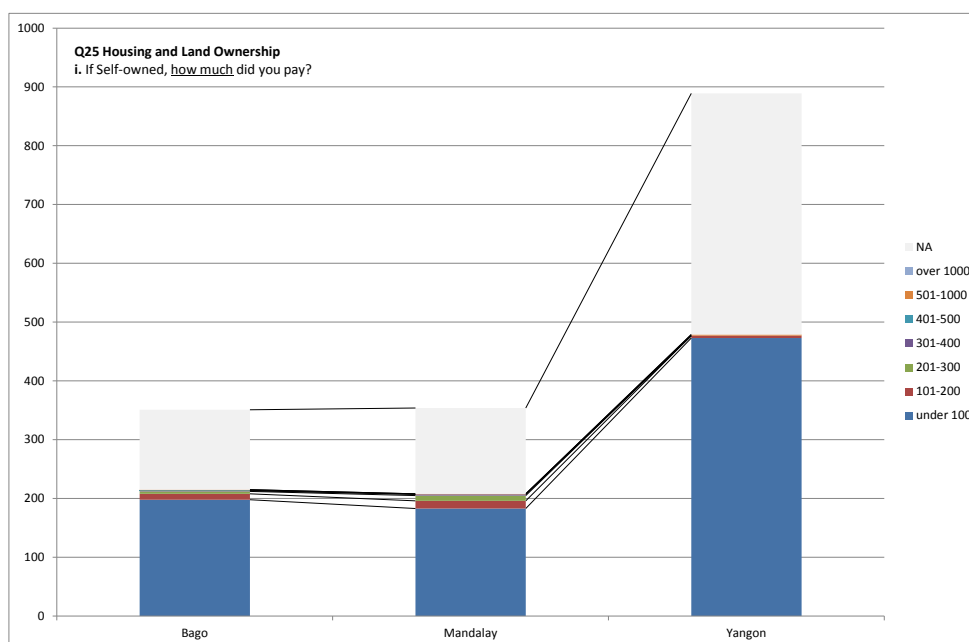
- It occupies a large number with self-ownership and rent with payment, but there are also a certain number of free rental / unknown etc. In the case of own ownership, the purchase times are varied, but most of them are covered by own funds.



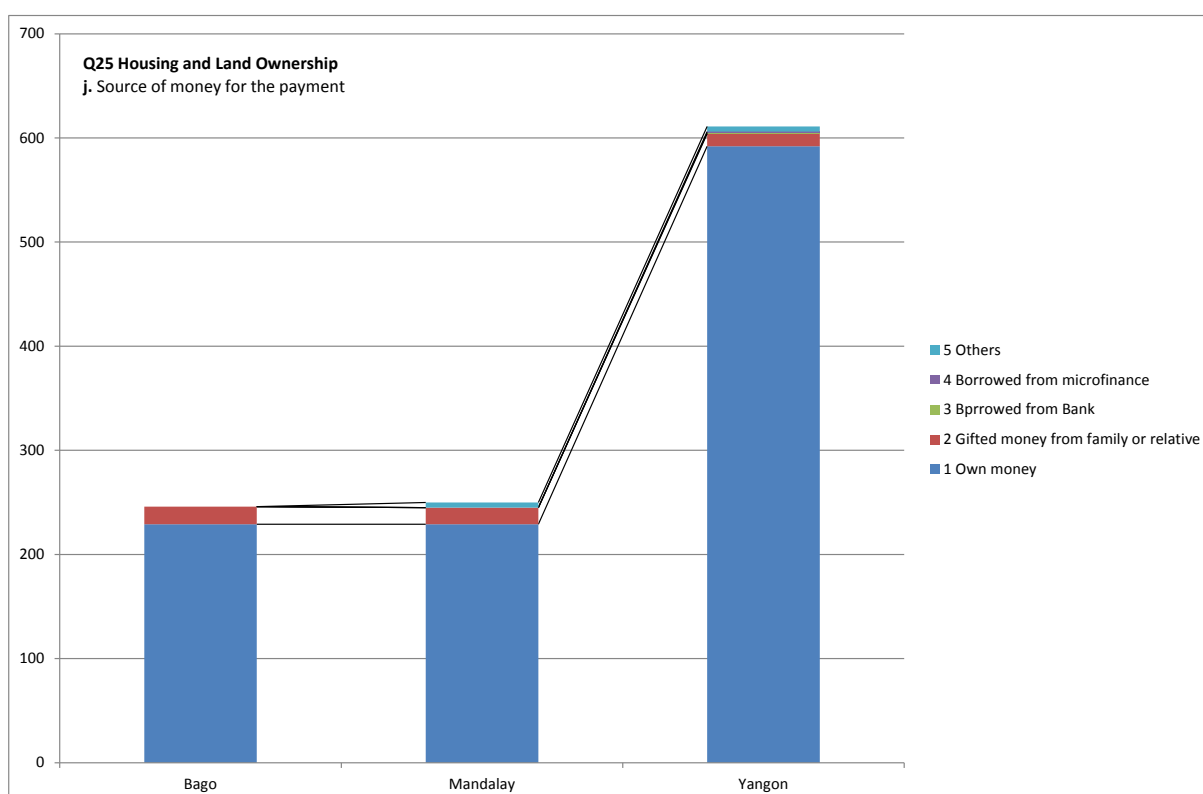
**Figure 5-39 Ownership of housing**



**Figure 5-40 time of payment when self-owned**

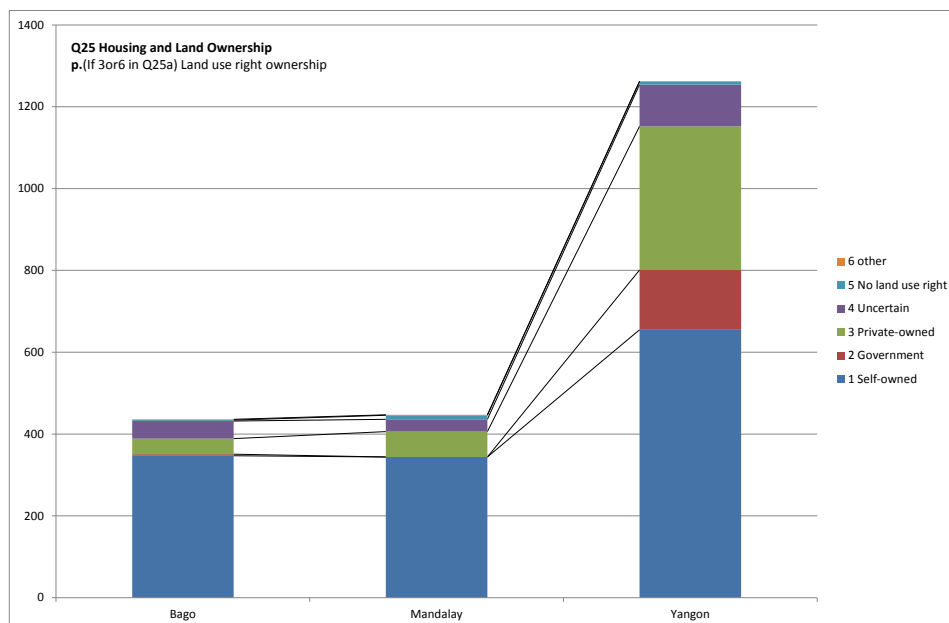


**Figure 5-41 amount of payment when self-owned**

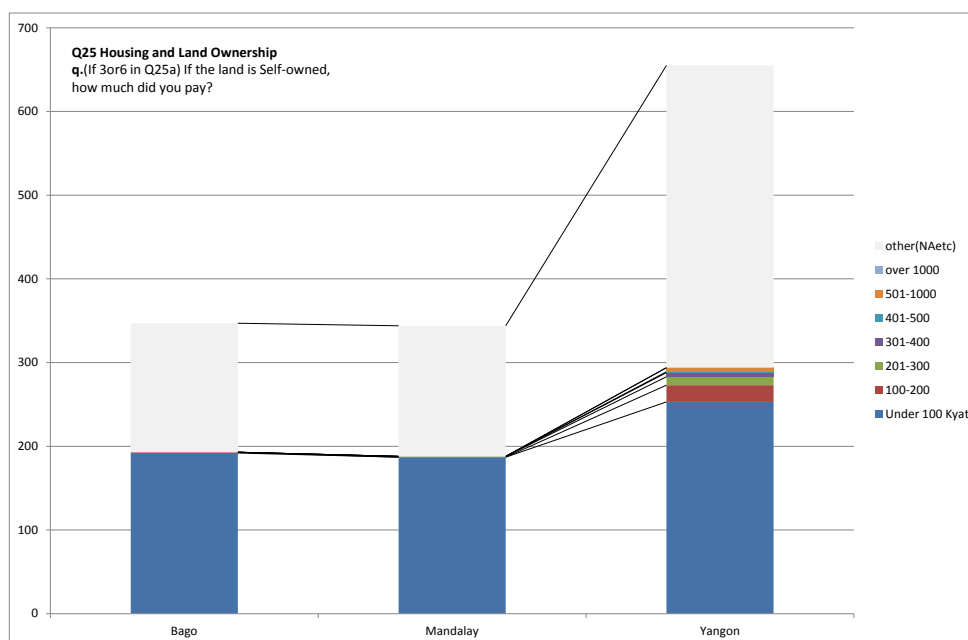


**Figure 5-42 Source of money for payment**

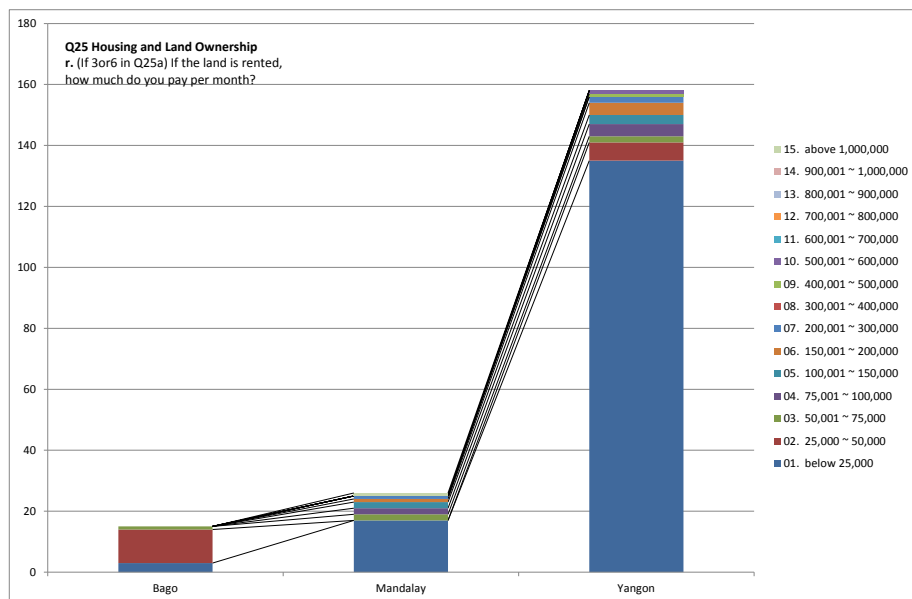
- As for ownership of land, self-ownership and rent are almost the same in Yangon, but most of Mandalay and Bago are self-owned.
- Regarding the purchase cost of land, nearly half of there are no answers, but most of the responses are within about 10 million MMK. 80% of leasehold fee accounts for less than 25,000 MMK.



**Figure 5-43 Land use right ownership**

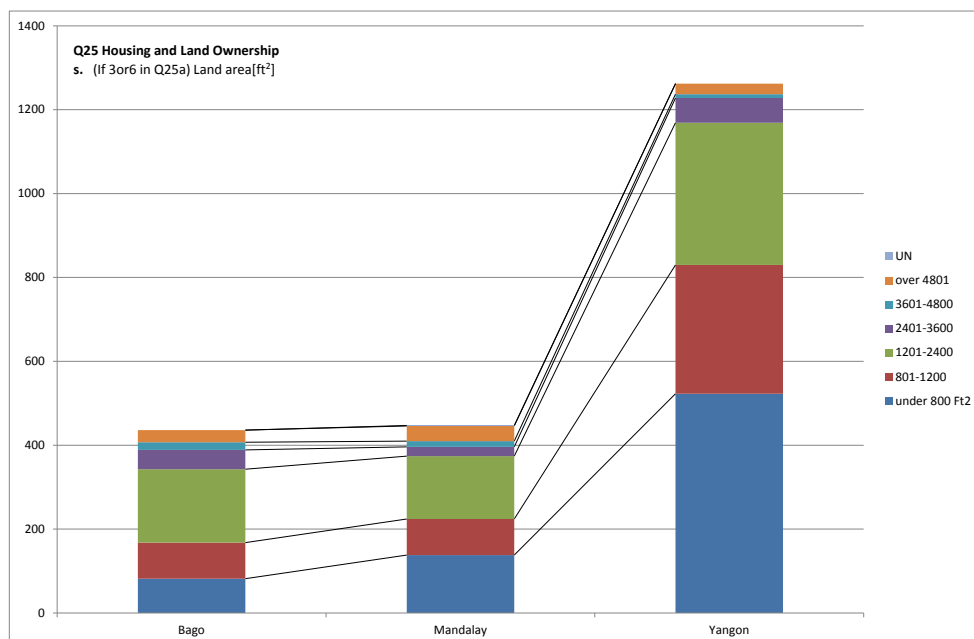


**Figure 5-44 amount of payment for the land**

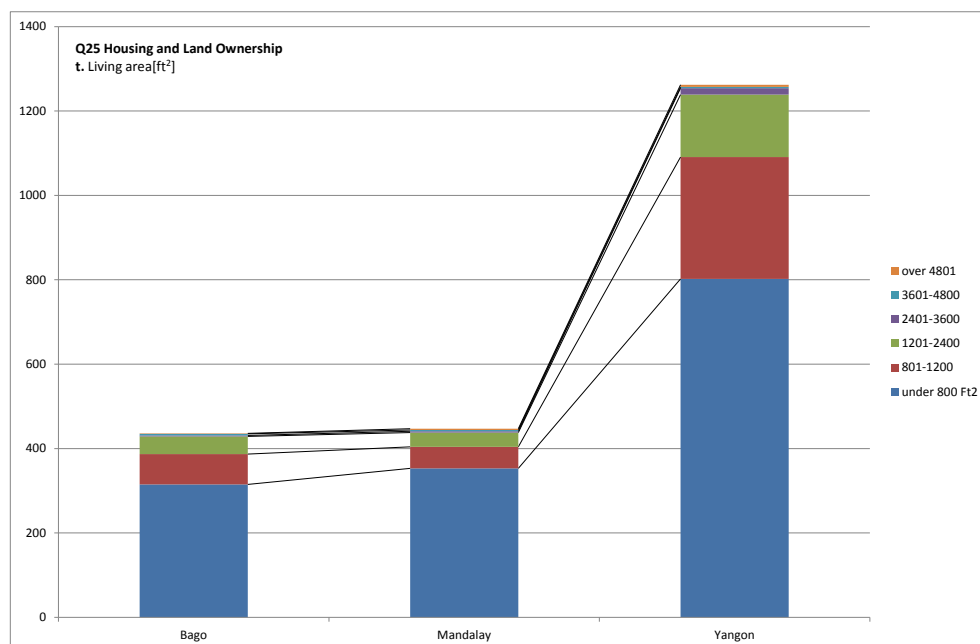


**Figure 5-45 amount of payment per month if rented**

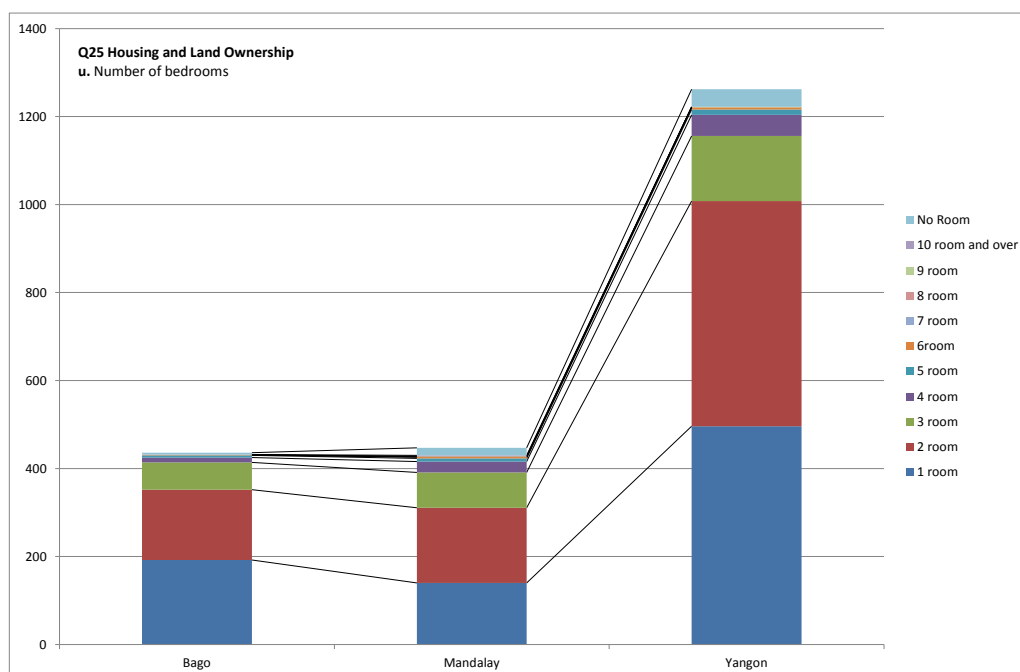
- Land and housing area vary, but more than 60% live in 800 square feet housing in Yangon.



**Figure 5-46 Land area**

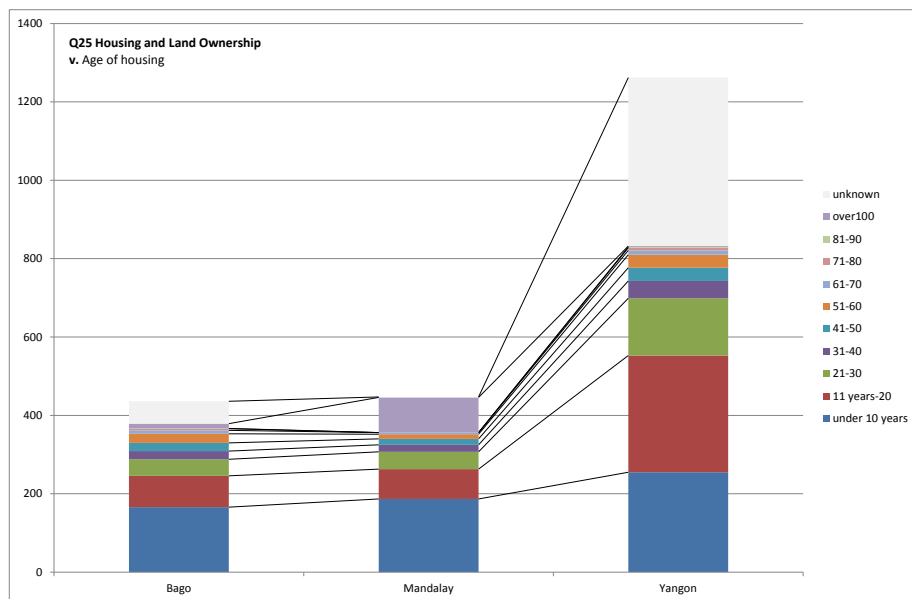


**Figure 5-47 Housing area**



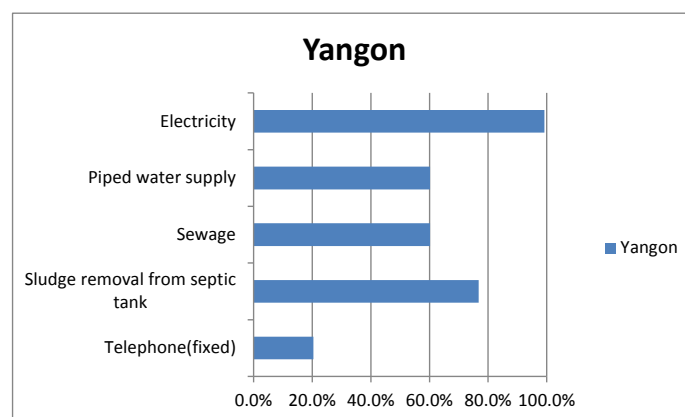
**Figure 5-48 Number of rooms**



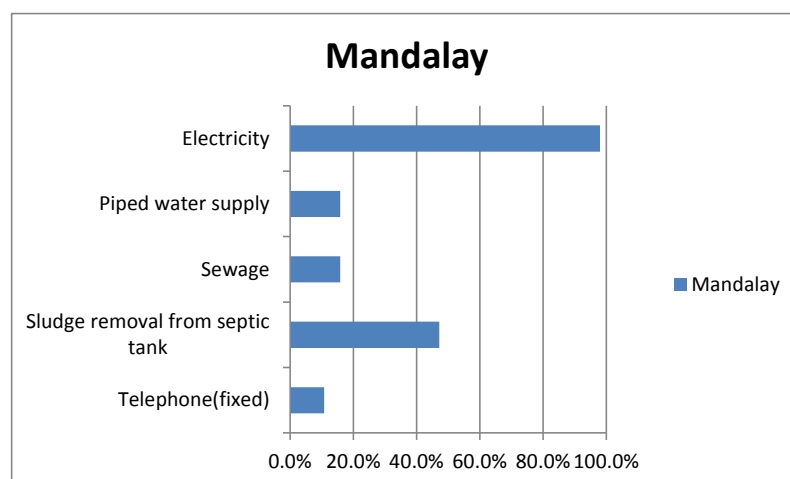


**Figure 5-49 Age of housing**

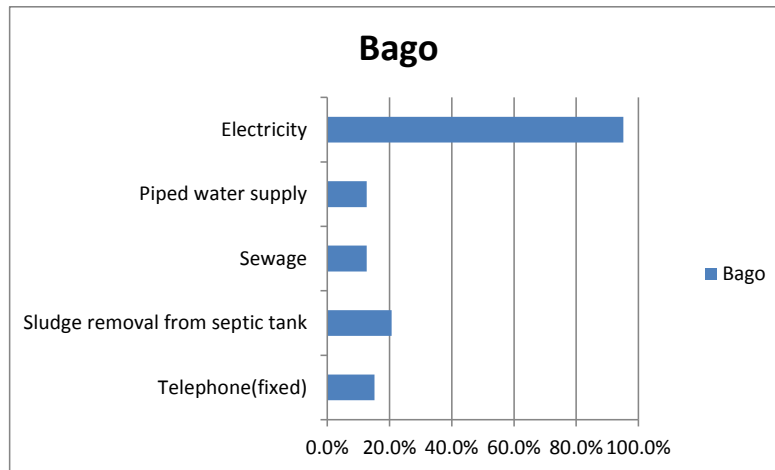
• Regarding the connection status of infrastructure, electricity is connected to all cities in general, but Yangon is less than 60% for water and sewage connections, and 20% for Mandalay and Bago.



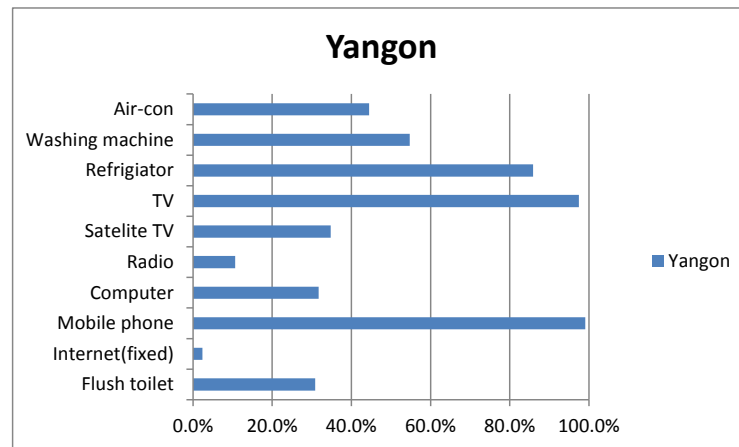
**Figure 5-50 Infrastructure connection status (Yangon)**



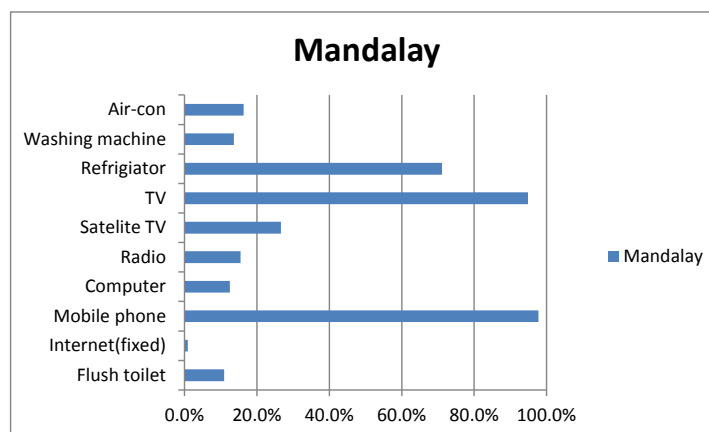
**Figure 5-51 Infrastructure connection status (Mandalay)**



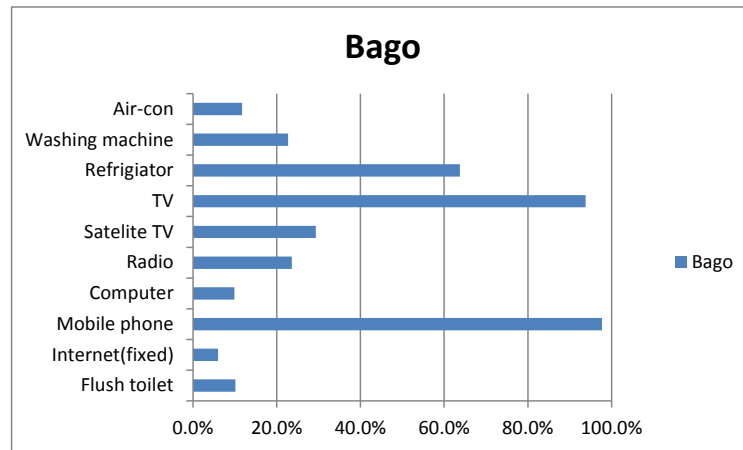
**Figure 5-52 Infrastructure connection status (Bago)**



**Figure 5-53 Ownership status of various facilities (Yangon)**



**Figure 5-54 Ownership status of various facilities (Mandalay)**

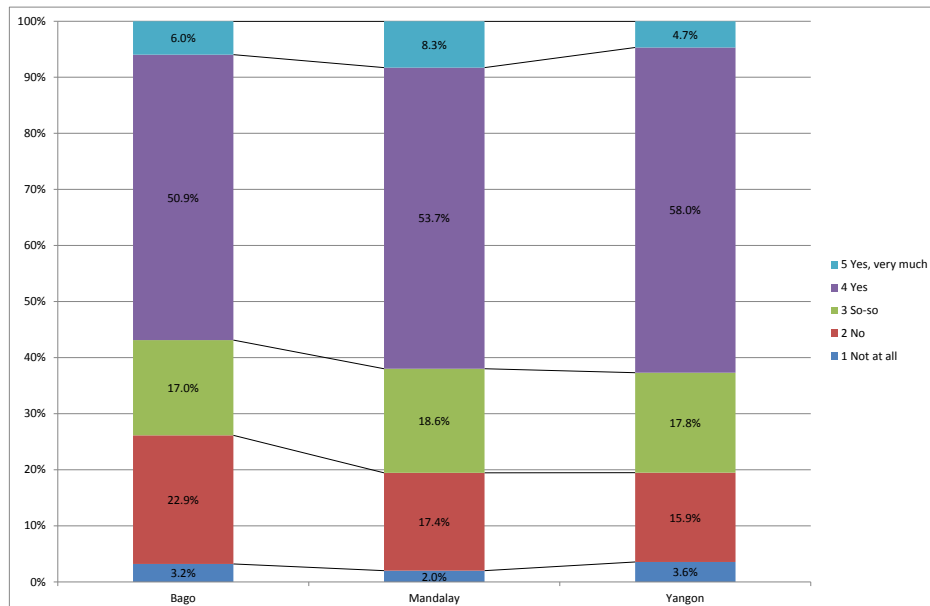


**Figure 5-55 Ownership status of various facilities (Bago)**

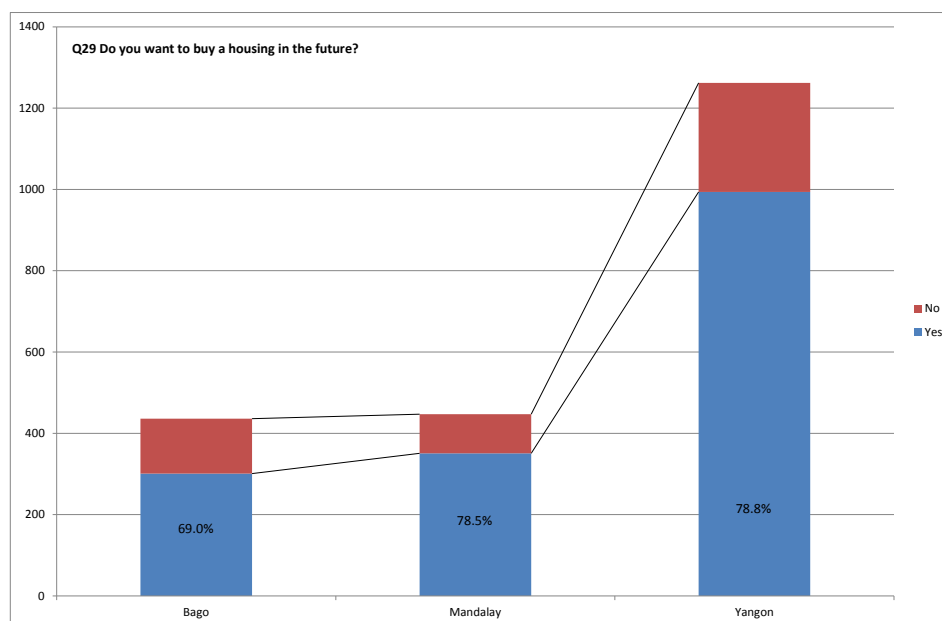
### 5.2.6 Housing Acquisition Intention and Its Conditions

#### Intention to acquire housing

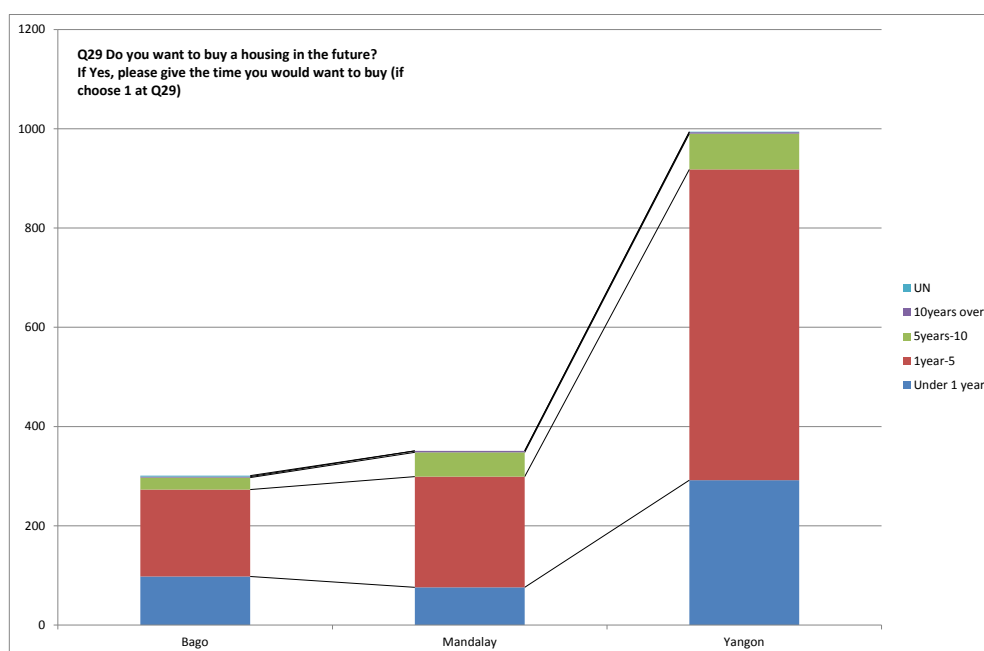
- While the satisfaction level with the residential housing is relatively high, the intention to acquire the houses is getting higher soon.
- The time to obtain acquisition is generally within 5 years, a newly built detached house, and emphasizing mainly on location, convenience, size and desires 2~3 numbers of rooms. The location is ideal within 30 minutes to the workplace. (Yangon is a bus for commuters, other cities are motorcycles)



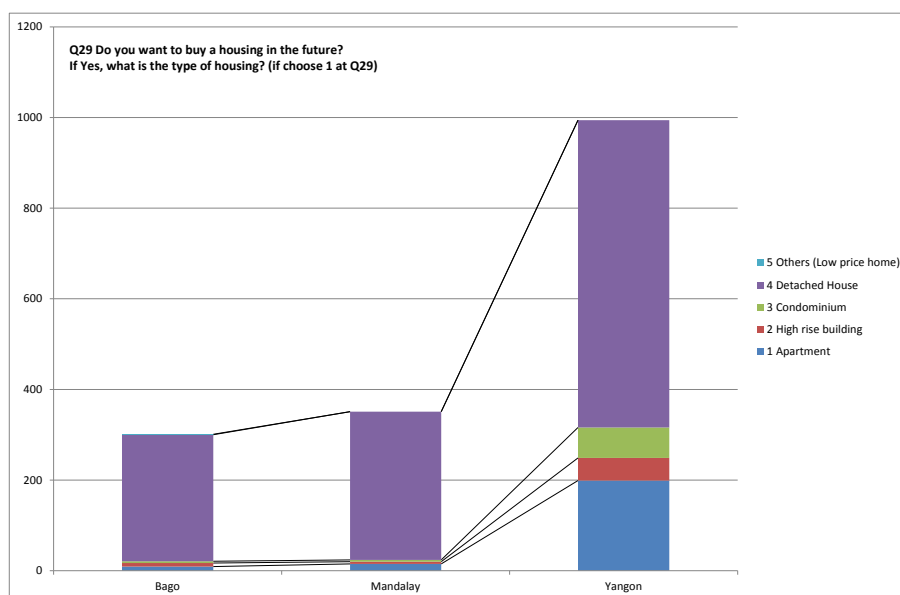
**Figure 5-56 Current housing satisfaction**



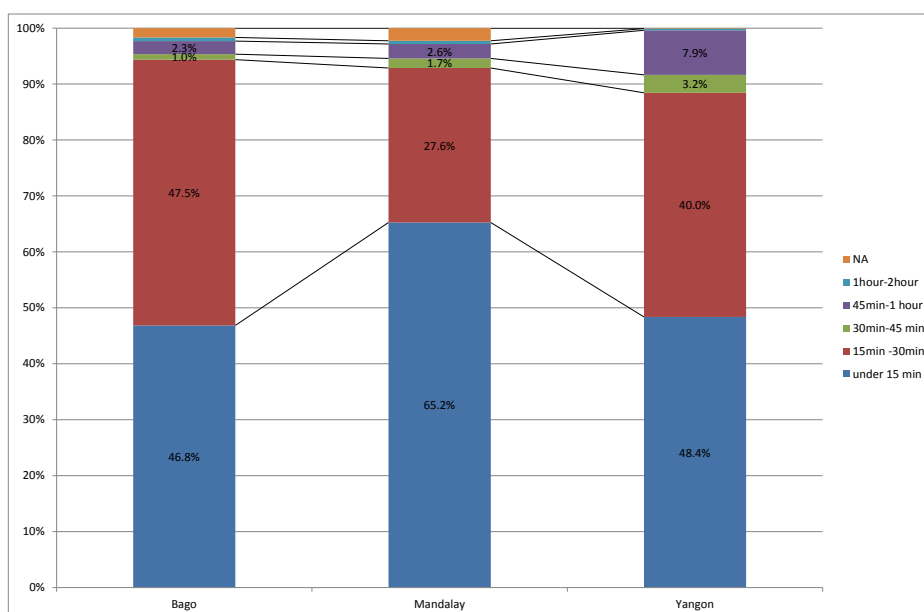
**Figure 5-57 Intention to acquire housing**



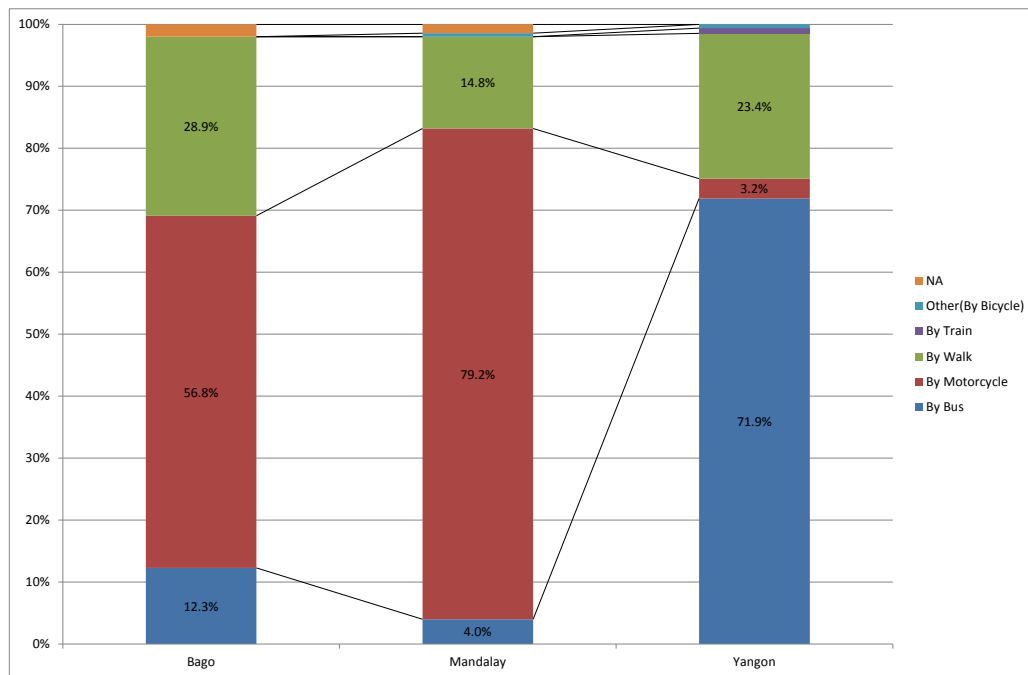
**Figure 5-58 When to acquire housing**



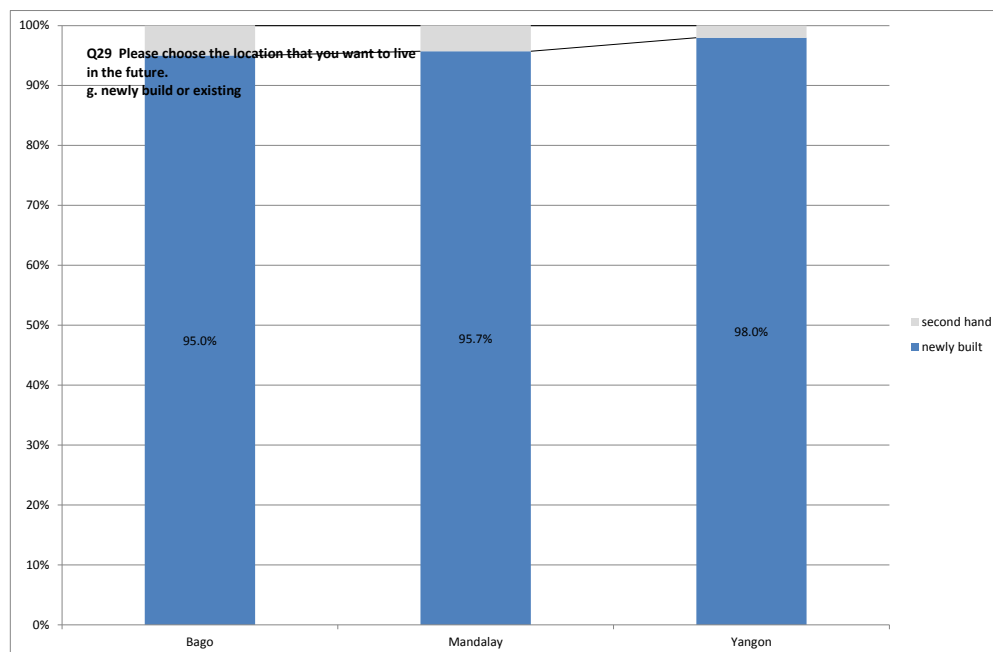
**Figure 5-59 Type of housing you want**



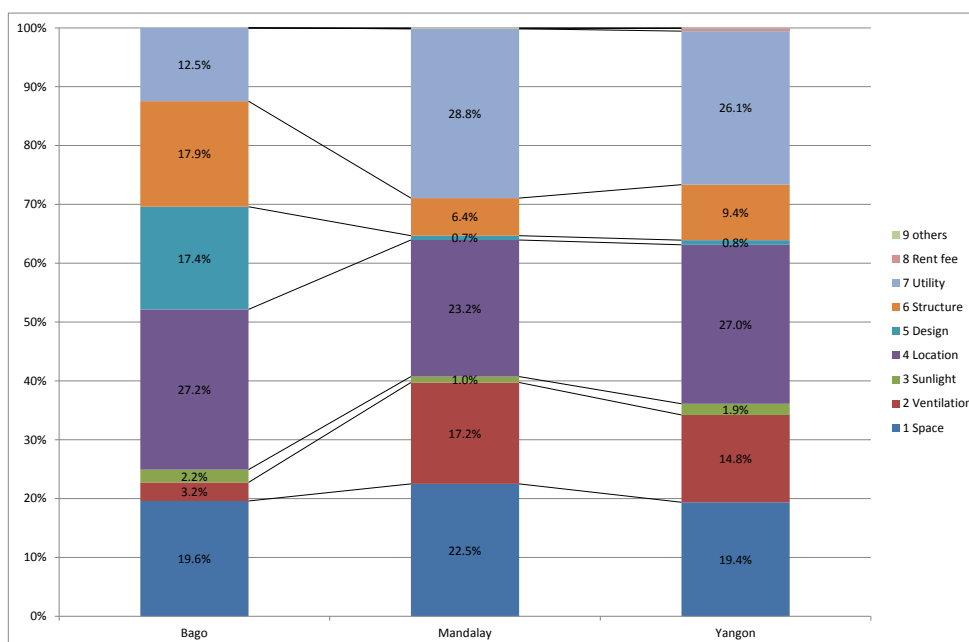
**Figure 5-60 Desired commuting time from the desired housing**



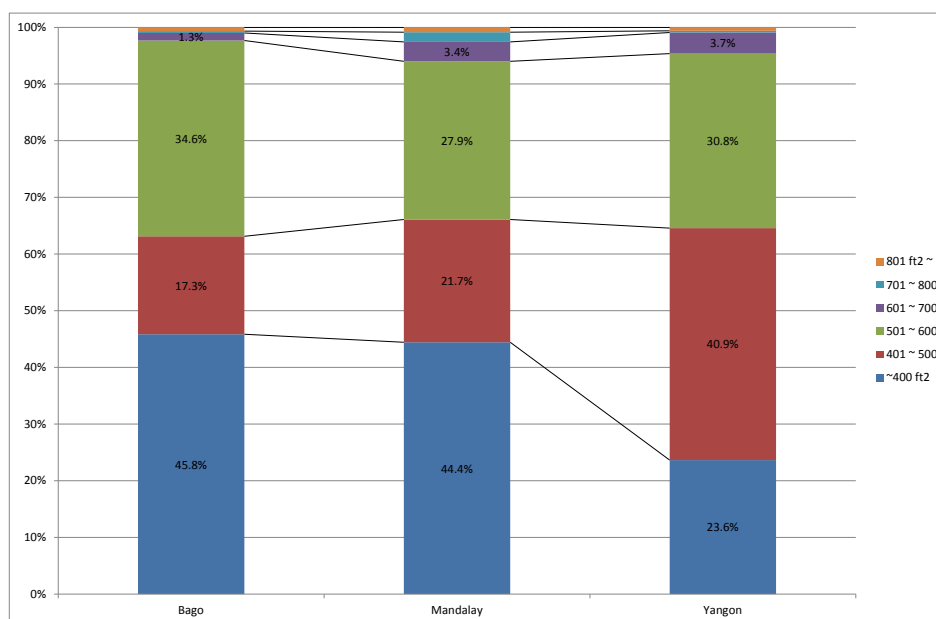
**Figure 5-61 Type of commuting from the desired housing**



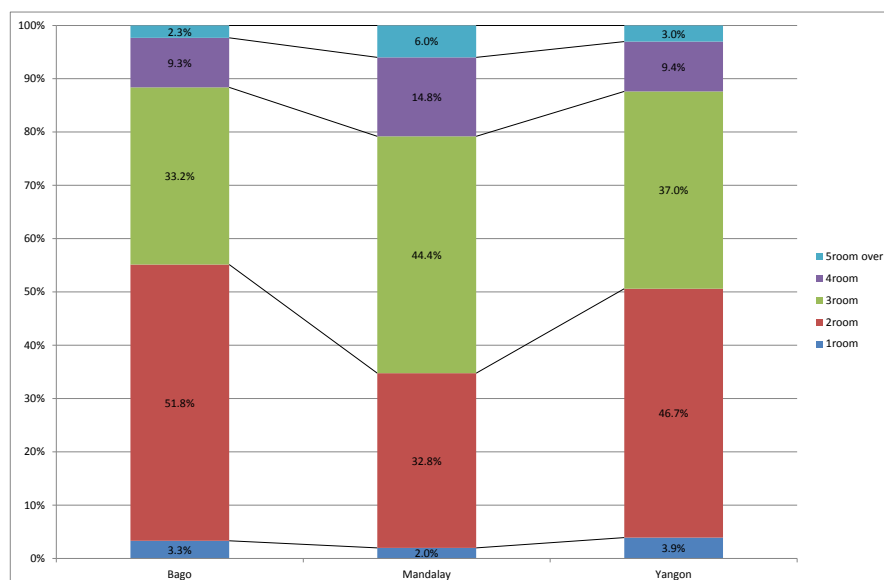
**Figure 5-62 Newly building or second hand of the desired housing**



**Figure 5-63 Points you want to emphasize in acquiring housing**



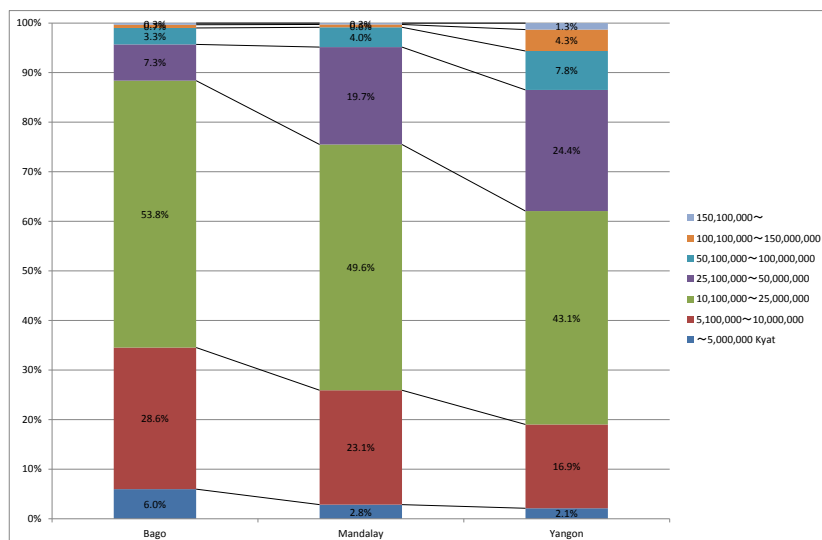
**Figure 5-64 The area of the desired housing**



**Figure 5-65 Number of rooms of the desired housing**

Budget for acquiring housing etc.

- The maximum payment limit is around 20% for 10 million MMK and 40% to 50% for 2.5 million MMK, with most households up to 50 million MMK.
- About 90% hopes to use mortgage loan, for monthly payments, it is a majority until around 100,000 MMK / month, very much less than 300,000 MMK / month.



**Figure 5-66 Maximum payment limit for housing purchase**



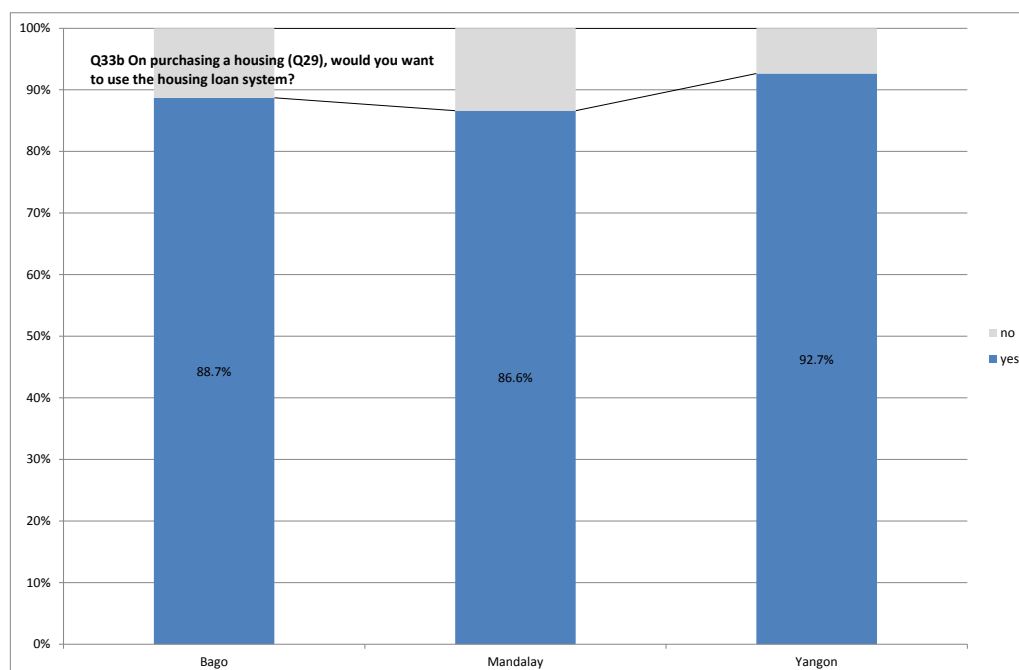


Figure 5-67 Hope to use a mortgage loan or not

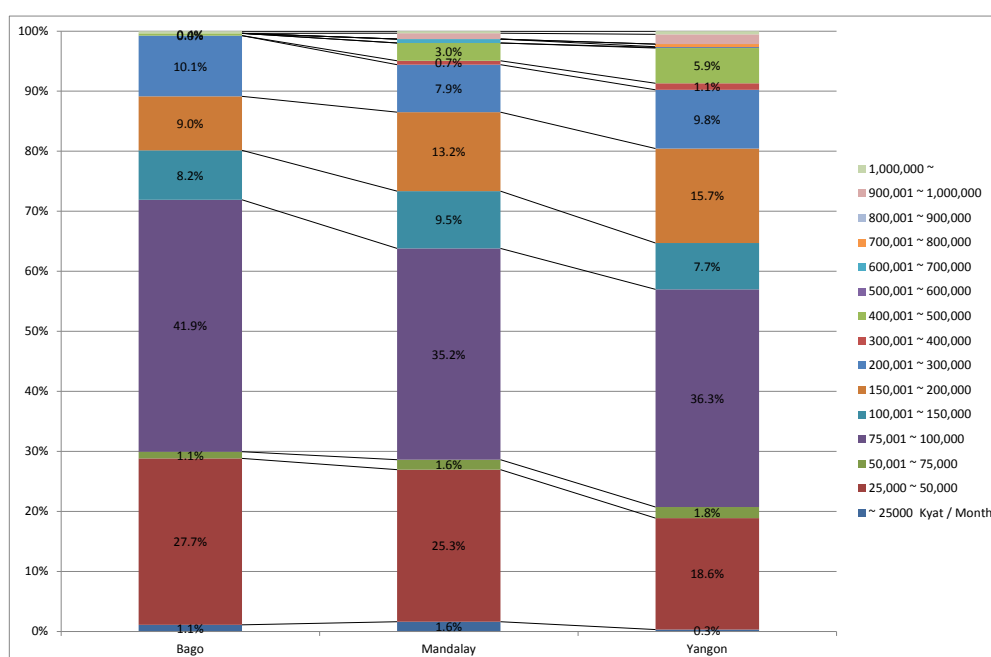


Figure 5-68 Monthly payable amount when using mortgage loan

### 5.3 Target of household for housing purchase

When purchasing a Low Income housing of 100 lakh MMK (about 1 million yen), if such a loan service with the 30% down payment, the fee of 1% and the annual rate of 8.5% fixed for 15 years (hereinafter “Low Interest Loan”) is available, the annual and monthly repayment amount shall be 8.5 lakh MMK (about 85,000 yen) and 0.7 lakh MMK (about 7 thousand yen) respectively. Then, the monthly income

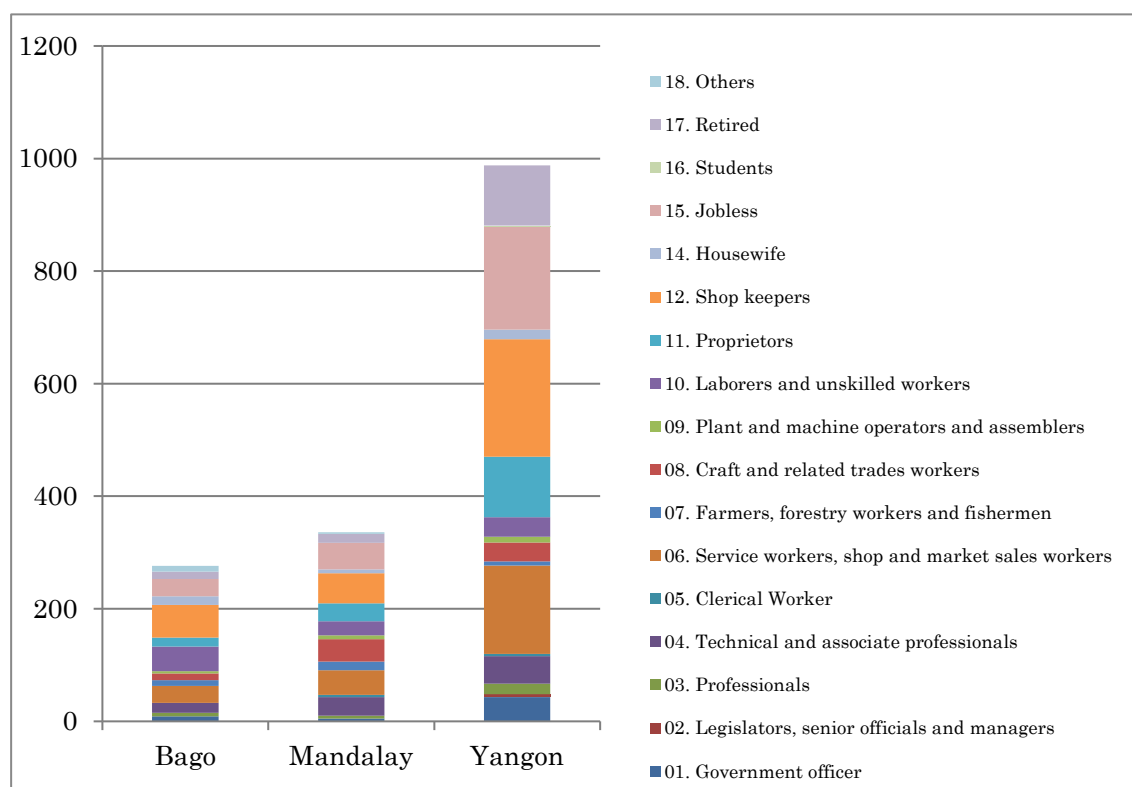
required will be more than 3.0 lakh MMK (about 30 thousand yen). From the demand survey, "Household who wish to acquire housing" and "Household monthly income 3.0 lakh MMK or more "was extracted.

**Table 5-1 Applicant for housing purchase**

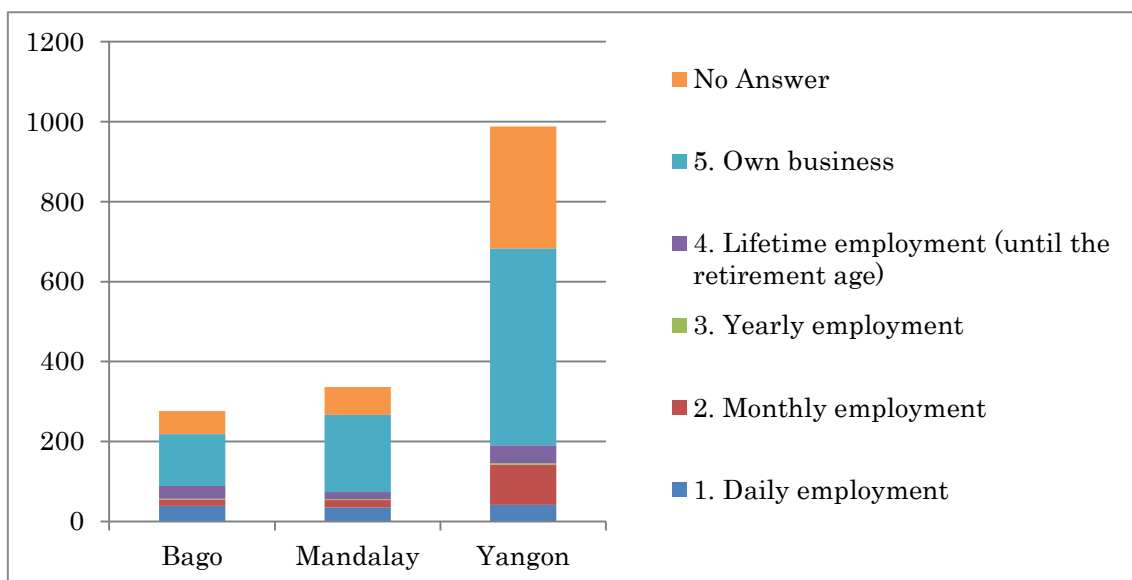
	Bago	Mandalay	Yangon	Total
Interviews	436	447	1,262	2,145
Number of HH	276	336	988	1,600
	Approx.63%	Approx.75%	Approx.78%	Approx.75%

### 5.3.1 Attributes of household head of housing purchasing applicant

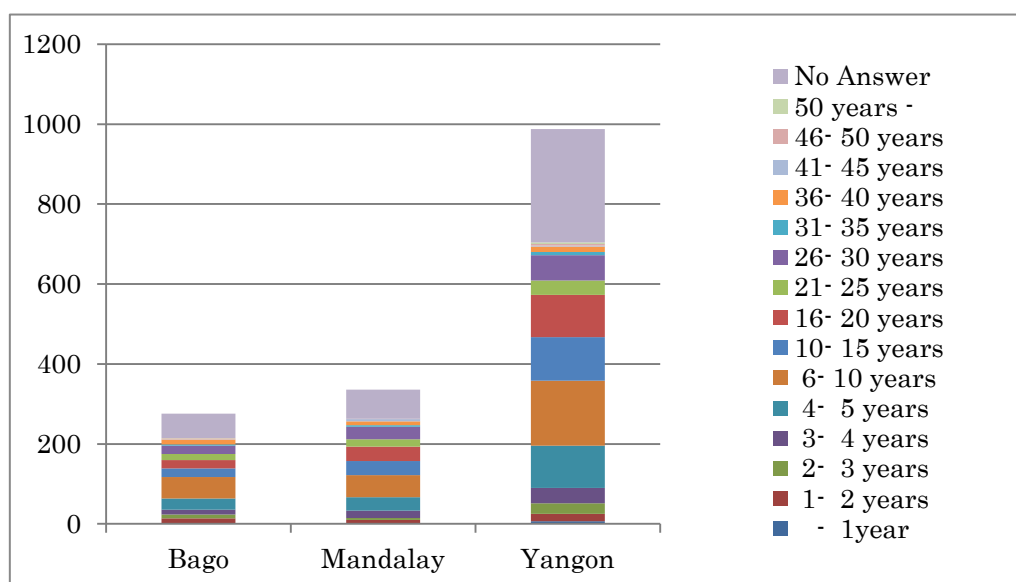
- Regarding employment situation of head of household, there are various types of occupation, but more than half of self-employed households.
- More than half of the household heads have more than six years of service.
- After graduation, the number of respondents who have non-working period is limited to 2% of respondents, and most household headers are considered to be working continuously.



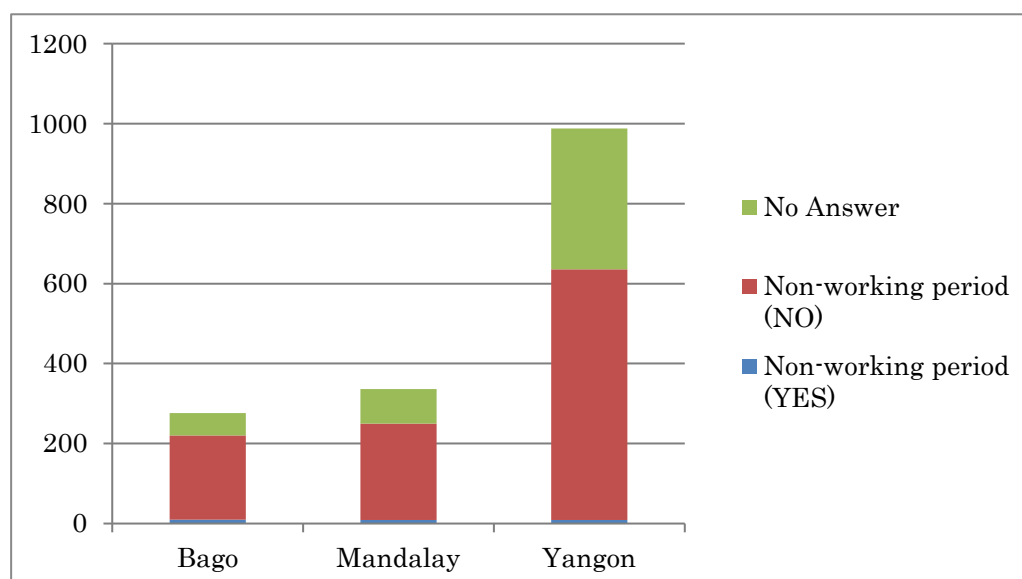
**Figure 5-69 Occupation of the household head which desires housings**



**Figure 5-70 Employment form of household head which desires housings**



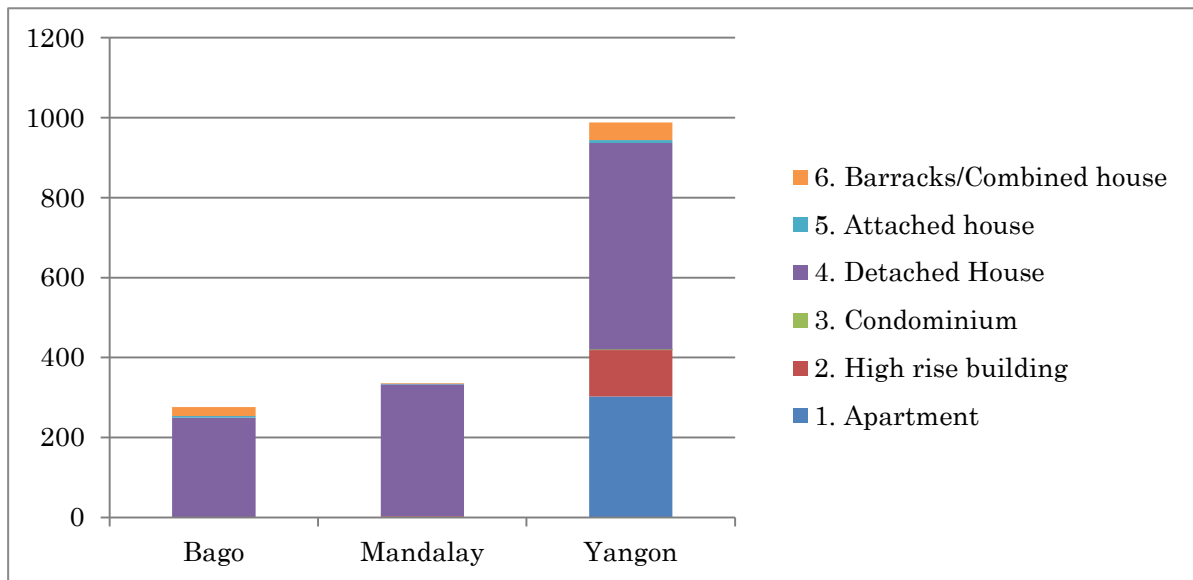
**Figure 5-71 Employment period of household head which desires housings**



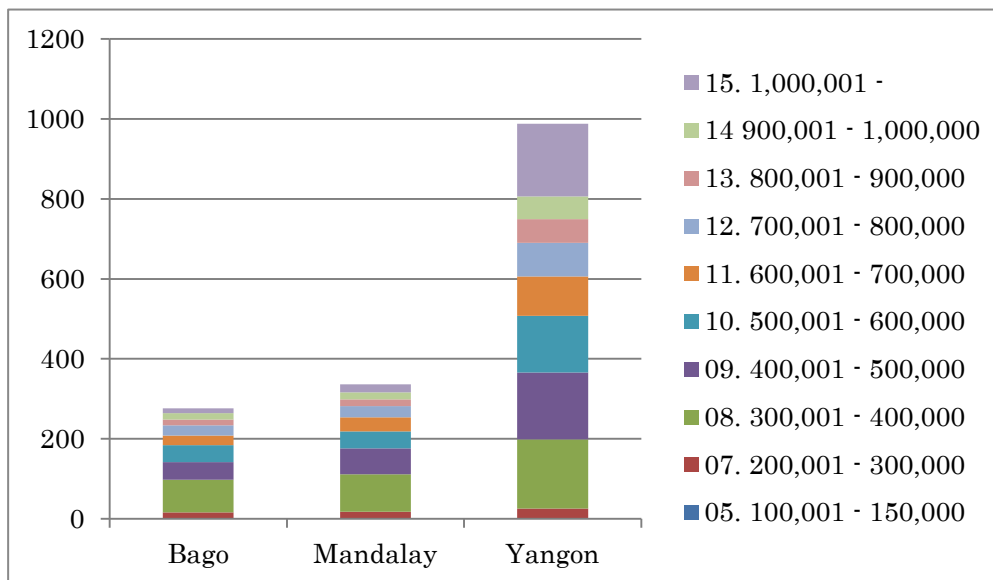
**Figure 5-72 Non-working period of household head which desires housings**

### 5.3.2 Attributes of household which desires housings

- Current residence is detached housings, 90% for Bago and 98% for Mandalay.
- In Yangon, the number of detached housings is 52%, and residential households such as apartments are 42%.
- Current housing owners are 73% in Yangon, 80% in Bago and Mandalay.
- Those who have a bank account are about 40%.
- In the households who responded to the fund procurement of households who own the current residence, most of them are self-funded. Of the 1,102 households interviewed, only one household of Bago was borrowed from the bank.
- When the current residence is rented, households with monthly rent less than MMK100,000 were 67% for Bago, 45% for Mandalay and 36% for Yangon.
- For household income, it is considered that 10% of all households are ranked higher by one rank than household income category in each fiscal year from fiscal 2015 to fiscal 2016, and from fiscal 2016 to fiscal 2017.



**Figure 5-73 Current residence type of those who desire housings**

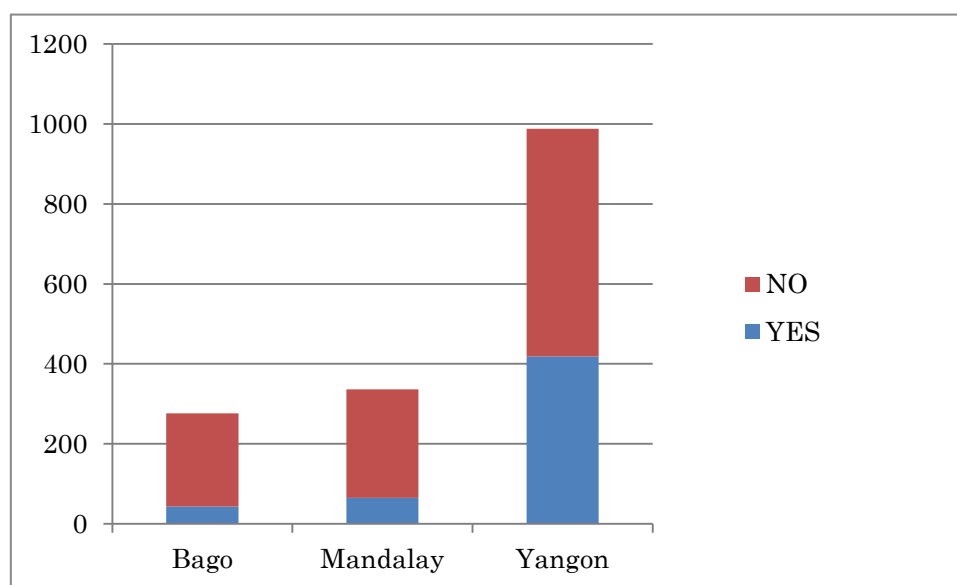


**Figure 5-74 Household monthly income of 2016 which desires housings**

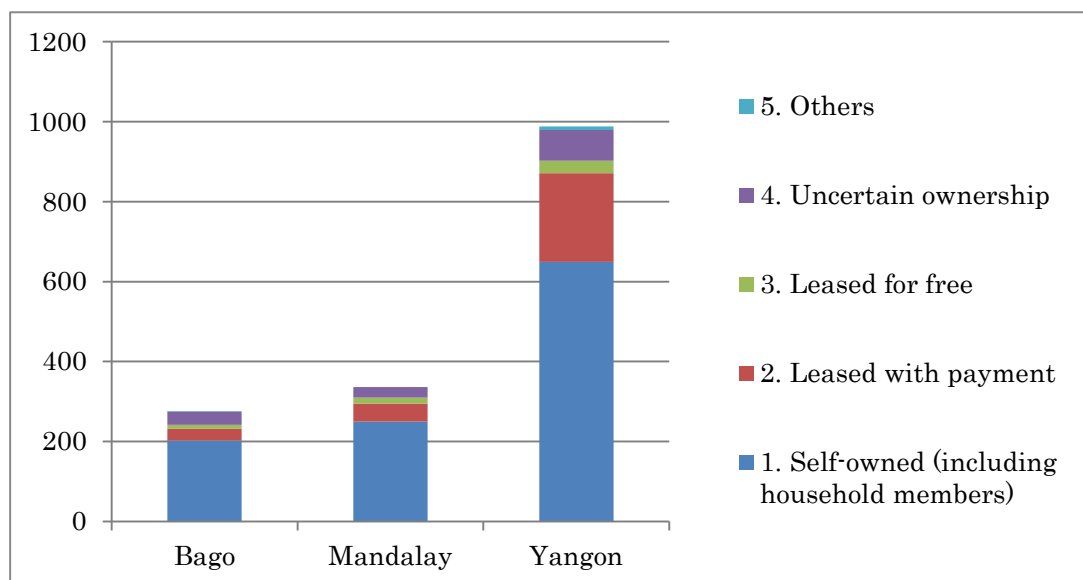
**Table 5-2 Rise in household income**

HH Monthly income (2017)	Up/Down HH income								Total
	-2	-1	0	1	2	3	4	5	
08. 300,001 - 400,000			58	3					61
09. 400,001 - 500,000		1	51	4					56
10. 500,001 - 600,000		1	27	1	1			1	31
11. 600,001 - 700,000			17	2					19
12. 700,001 - 800,000			19	4					23
13. 800,001 - 900,000			14		1				15
14. 900,001 - 1,000,000		2	10	3	1				16
15. 1,000,001 -			32						32
Total	0	4	228	17	3	0	0	1	253
Up/Down x numero of HH	0	-4	0	17	6	0	0	5	24

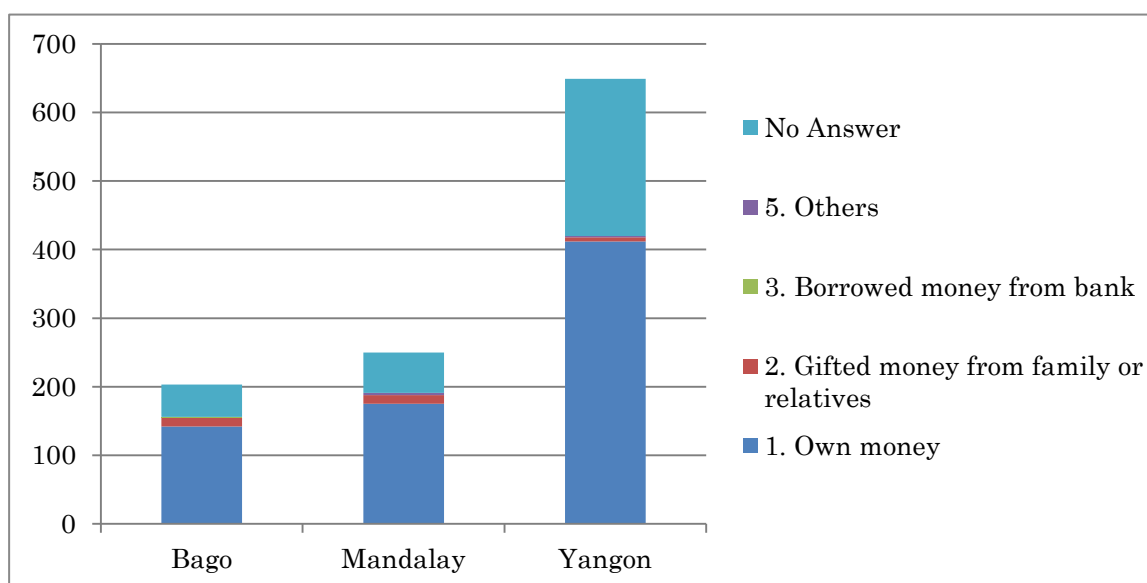
HH Monthly income (2017)	Up/Down HH income								Total
	-2	-1	0	1	2	3	4	5	
08. 300,001 - 400,000		4	47	10					61
09. 400,001 - 500,000		2	46	7	1				56
10. 500,001 - 600,000		1	29	1					31
11. 600,001 - 700,000		1	13	5					19
12. 700,001 - 800,000	1	2	17	2	1				23
13. 800,001 - 900,000			14	1					15
14. 900,001 - 1,000,000			13	1	1	1			16
15. 1,000,001 -			32						32
Total	1	10	211	27	3	1	0	0	253
Up/Down x numero of HH	-2	-10	0	27	6	3	0	0	24



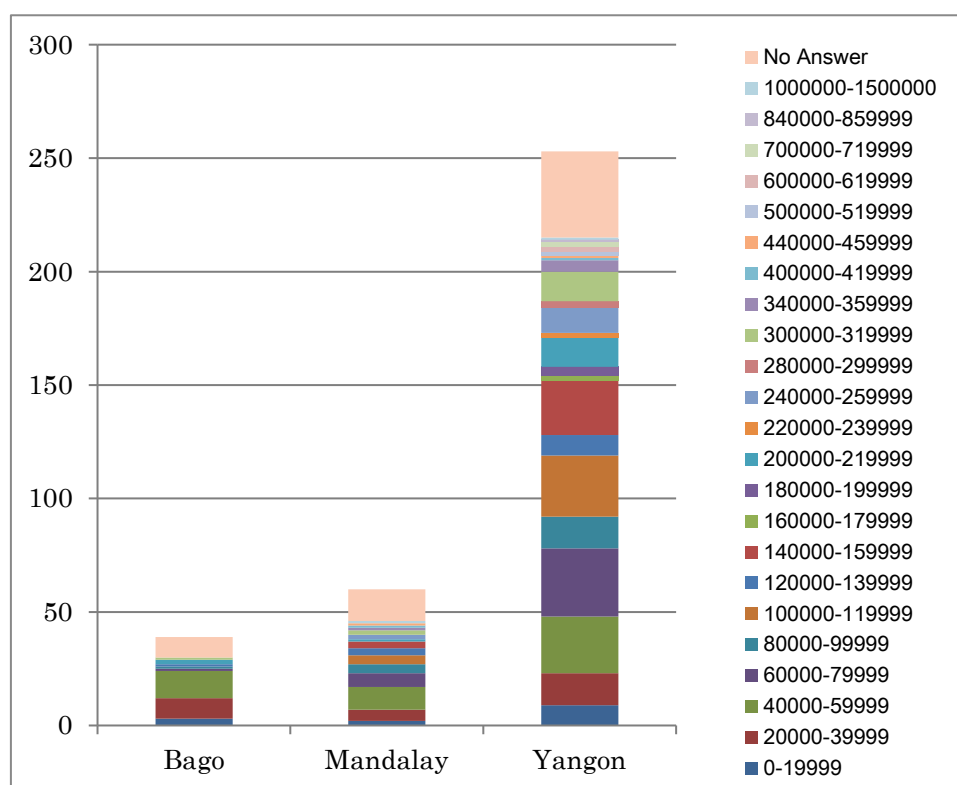
**Figure 5-75 Bank account holding status of those who desires housings**



**Figure 5-76 Form of ownership of the current residence of those who desires housings**



**Figure 5-77 Payment resources for the current residence of those who desires housings**

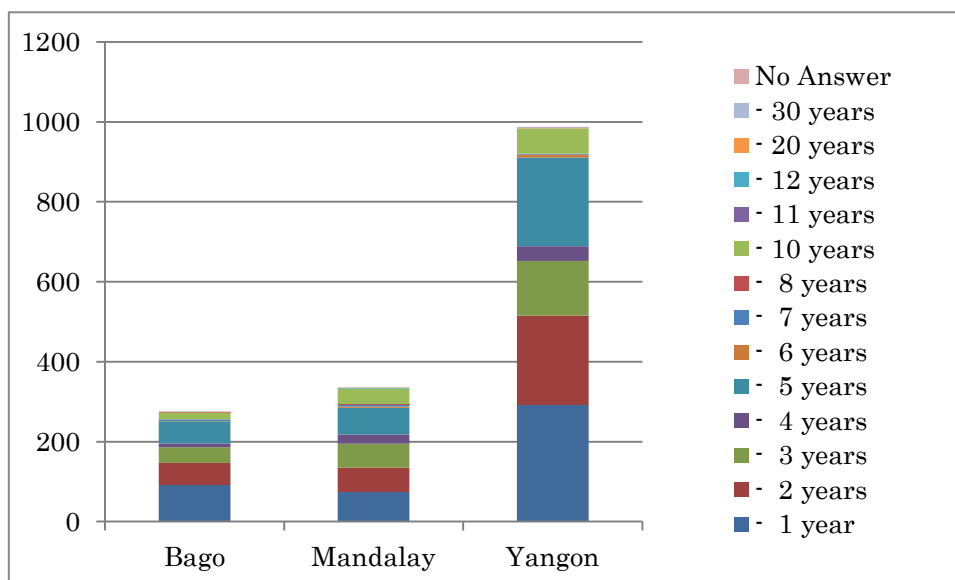


**Figure 5-78 Monthly rent fee of the current residence**

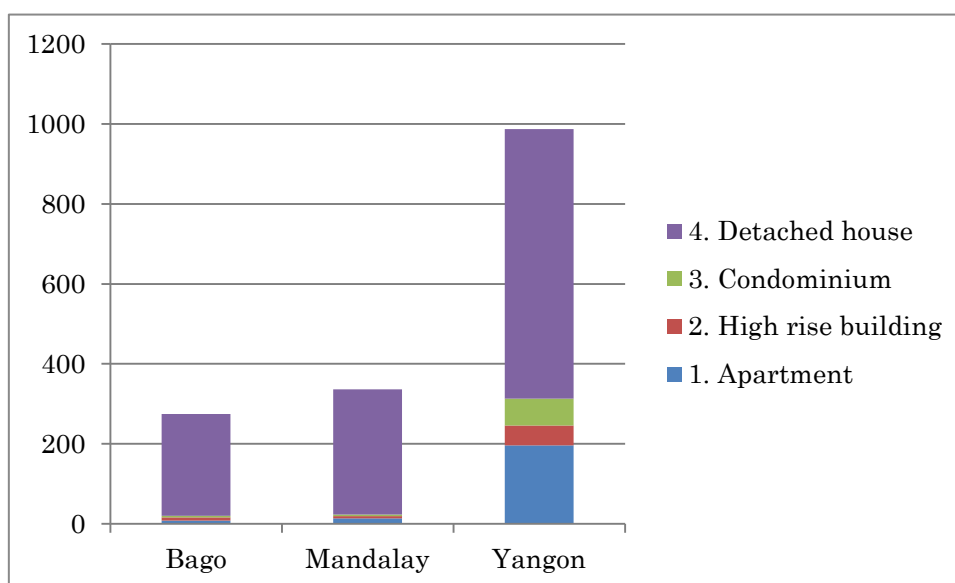
### 5.3.3 Type of housings to be desired

- 90% of households wish to purchase newly built houses within 5 years, and in Yangon, more than 50% wish within 2 years.
- In Bago and Mandalay, detached houses are mostly wanted. In Yangon, about 30% desires apartments etc.
- The point that emphasizes on purchasing housing is the residential area, the location, and the infrastructure utilities such as electricity, gas and water service.
- Households with purchasing housing area of 800 ft. 2 are about 45% in Bago and Mandalay and 23% in Yangon.
- Households with an acquisition limit of 25mil. is 88% for Bago, 75% for Mandalay and 62% for Yangon.
- About 90% of households who wish to buy a housing wish to use a mortgage loan.

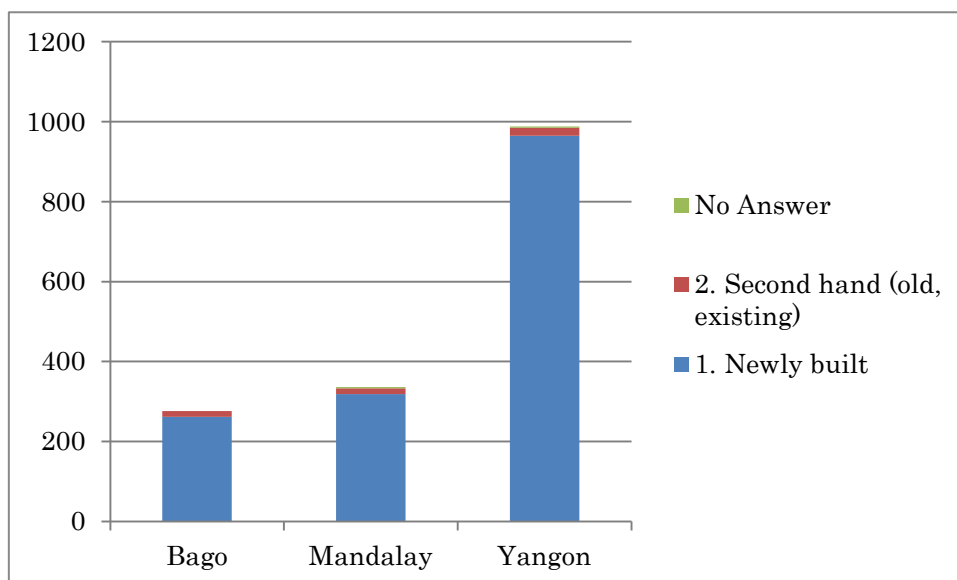




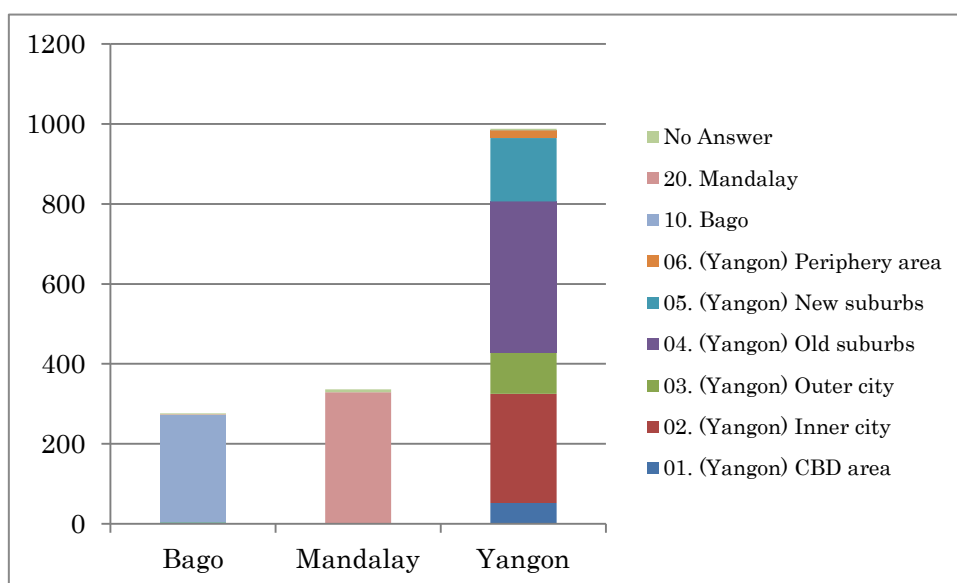
**Figure 5-79 Timing of purchasing housings of those who desires housings**



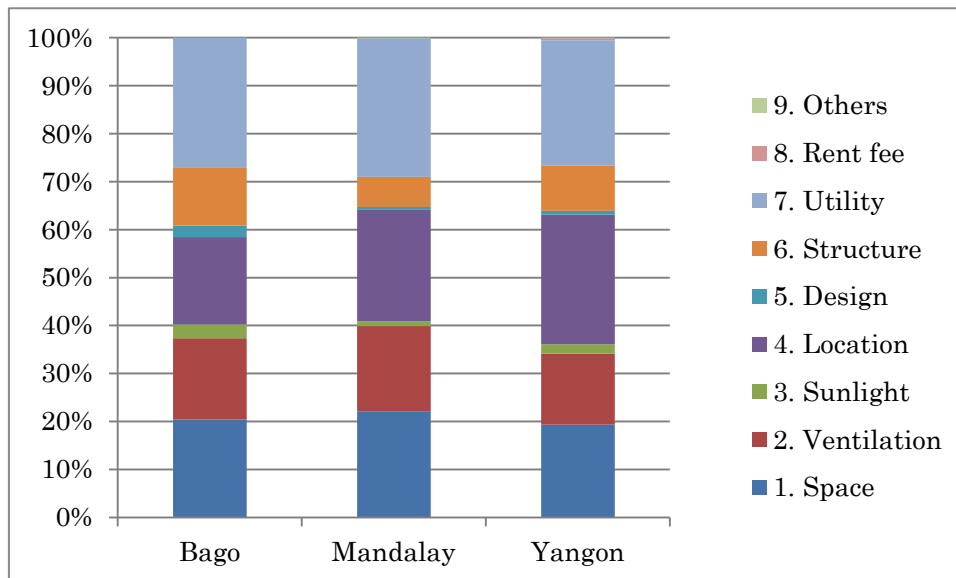
**Figure 5-80 Type of housings desired of those who desires housings**



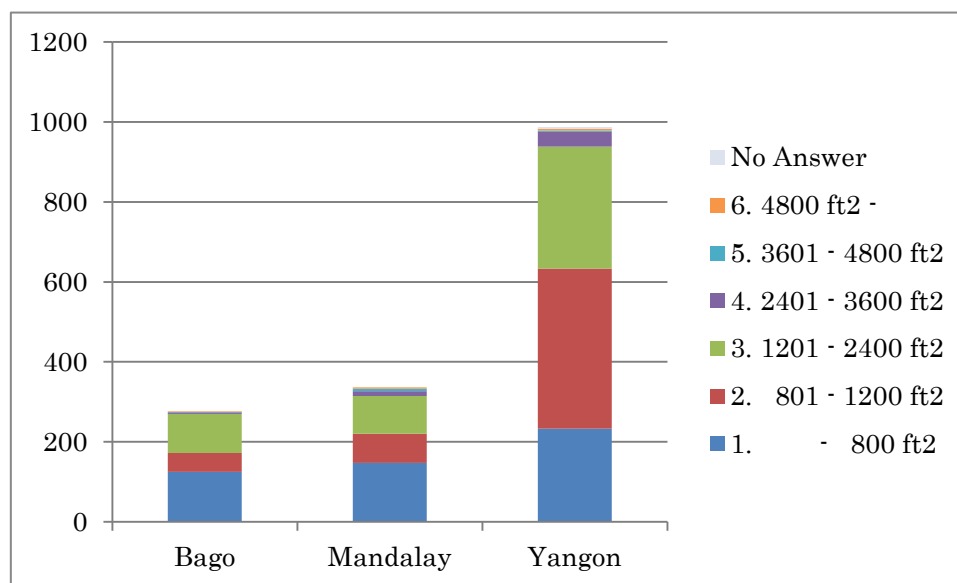
**Figure 5-81 Type of housings desired of those who desires housings (New/Second hand)**



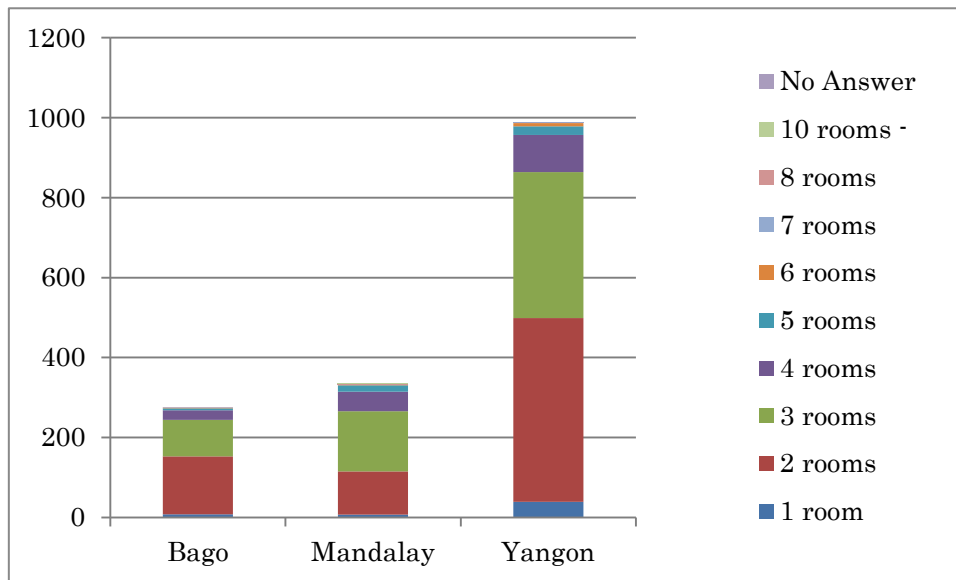
**Figure 5-82 Location of the desired housings of those who desires housings**



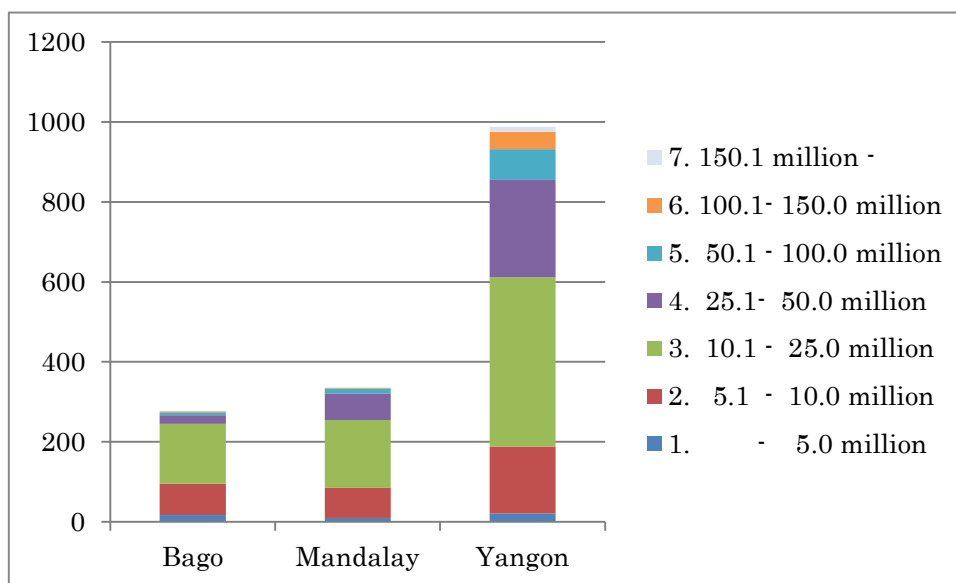
**Figure 5-83 Reason to desire housings of those who desires housings**



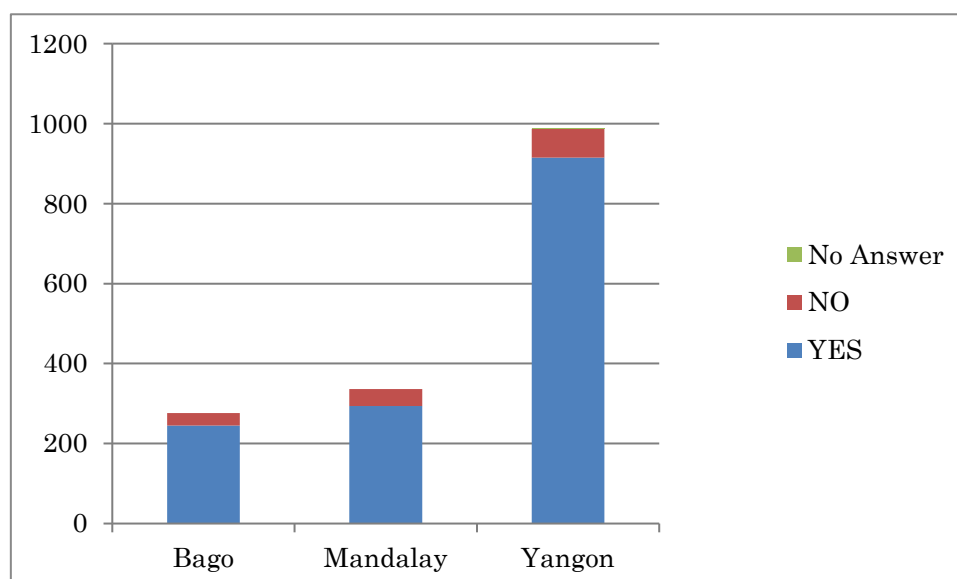
**Figure 5-84 Housing area to be desired of those who desires housings**



**Figure 5-85 Number of rooms desired of those who desires housings**



**Figure 5-86 Maximum fee of purchasing housings of those who desires housings**



**Figure 5-87 To use mortgage loan or not of those who desires housings**

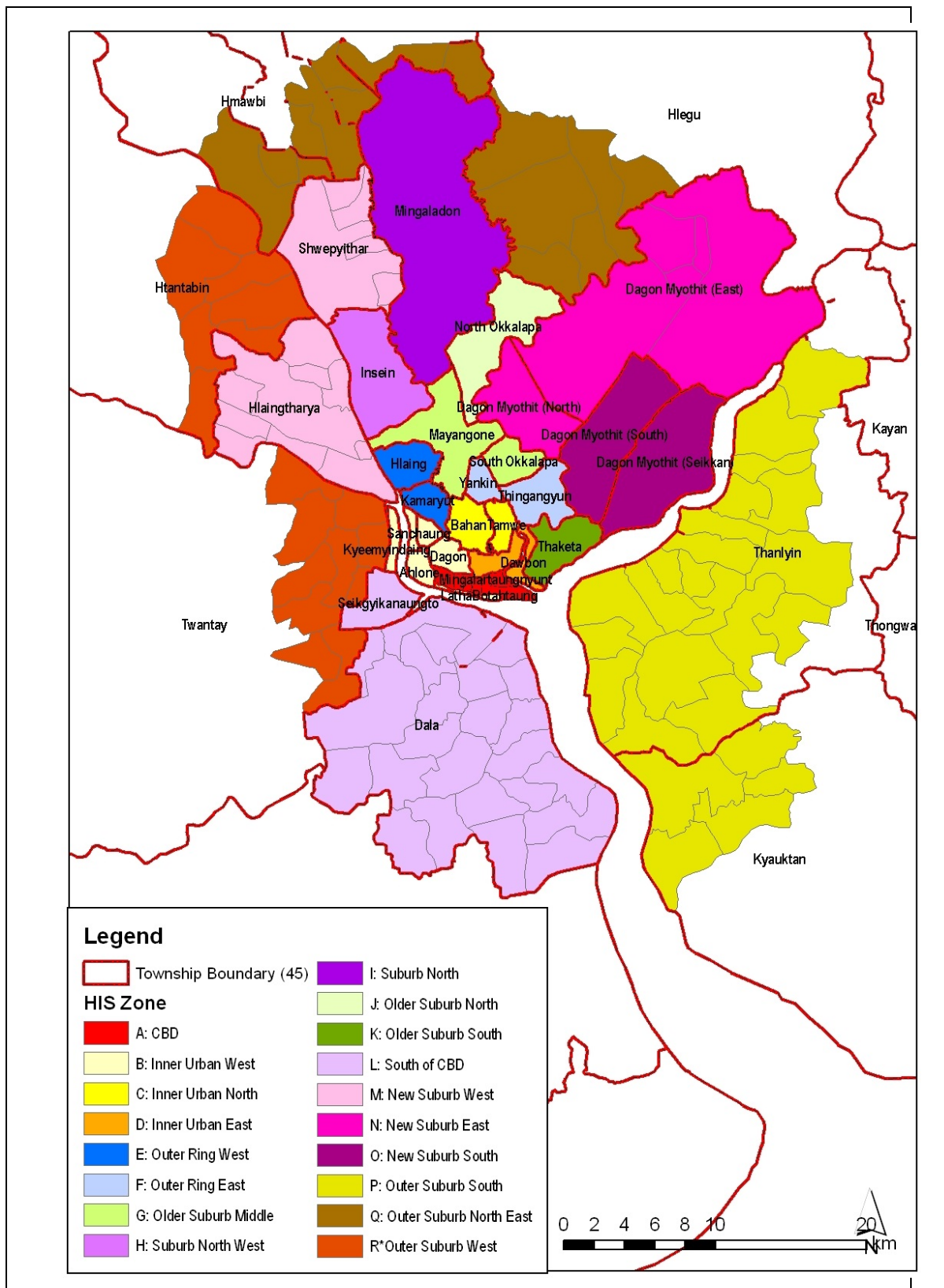
## 5.4 Estimation of eligible household for housing finance in Yangon

From the demand survey in Yangon, "Household who wish to acquire housing" and "Household monthly income 3.0 lakh MMK or more "was extracted.

### 5.4.1 Number of households which does not own housings in Yangon

According to the result of the census conducted in Myanmar in 2014, the total household of Yangon (Greater Yangon) is 1,368,556. Of these, 821,415 households own the house, 526,019 households reside in the rental housing, and 22,122 other households.

Since the data on the population and household number of the peripheral area in SUDP (2012 (JICA)) are separated from the data of the National Police Survey and the total number is different, estimates are made based on the result of the census.



Source: JICA Study Team SUDP (2012 (JICA))

**Figure 5-88 Targeted Area of SUDP (Yangon)**

**Table 5-3 Households living in rented housings in Yangon**

Target Number of Household															
SUDP (2012 JICA)								Census 2014							
Township	Area (mile <sup>2</sup> )	Area ( m <sup>2</sup> )	Population	Household	No. of Samples	Sample Rate (%)	No. of Wards	Population	Type of ownership						
									Total	Owner	Renter	Provided free (individually)	Government Quarters	Private Company Quarters	Other
Latha	0.31	0.79	34,125	5,368	66	1.2	10	25,057	4,473	3,192	834	170	244	20	13
Lanmadaw	0.54	1.38	43,137	7,334	89	1.2	12	47,160	8,599	5,394	1,912	343	750	84	116
Pabedan	0.28	0.72	37,551	5,366	66	1.2	11	33,336	6,563	4,937	1,215	246	82	32	51
Kyauktada	0.28	0.72	34,797	6,078	74	1.2	9	29,853	6,120	4,207	1,321	151	354	32	55
Botahitaung	0.96	2.46	49,134	8,148	99	1.2	10	40,995	8,397	4,468	1,337	227	2,165	93	107
Pazuntaung	0.39	1.00	53,648	8,258	101	1.2	9	48,455	10,306	6,866	2,552	321	365	53	149
CBD AREA			252,392	40,552	495	1.2	61	224,856	44,458	29,064	9,171	1,458	3,960	314	491
Ahlon	1.04	2.66	65,510	9,021	90	1.0	11	55,482	10,943	5,766	2,330	432	1,893	145	377
Kyee Myin Daing	4.81	12.31	115,841	20,215	202	1.0	22	111,514	23,062	15,565	5,693	920	710	47	127
Sanchaung	0.96	2.46	105,208	17,242	212	1.2	18	99,619	20,635	13,004	5,659	935	842	71	124
Dagon	1.96	5.02	24,492	3,682	37	1.0	5	25,082	4,608	1,861	471	87	1,913	206	70
Bahan	3.41	8.73	100,695	16,339	163	1.0	22	96,732	17,426	9,597	4,256	753	2,183	356	281
Tarmwe	1.71	4.38	191,114	32,505	393	1.2	20	165,313	35,360	22,307	10,578	979	1,109	186	201
Mingalar Taung Nyunt	1.96	5.02	155,767	22,732	275	1.2	20	132,494	25,918	13,977	6,786	532	3,870	429	324
Seikkan	6.41	16.41	2,241	433	5	1.2	3	2,826	410	9	78	-	282	27	14
Dawbon	1.47	3.76	87,284	13,603	136	1.0	14	75,325	14,409	7,269	5,775	295	524	397	149
Inner City			848,152	135,772	1,513	1.1	135	764,387	152,771	89,355	41,626	4,933	13,326	1,864	1,667
Kamaryut	2.40	6.14	87,881	13,663	137	1.0	10	84,569	16,299	8,706	4,534	511	2,214	173	161
Hlaing	5.26	13.47	151,014	25,969	260	1.0	16	160,307	32,837	17,597	9,881	1,132	3,378	533	316
Yankin	1.94	4.97	125,909	13,921	139	1.0	16	70,946	14,637	7,902	3,347	371	2,540	173	304
Thingangyun	4.40	11.26	231,621	35,335	353	1.0	39	209,486	43,320	24,773	13,721	1,710	2,013	395	708
Outer City			596,425	88,888	889	1.0	81	525,308	107,093	58,978	31,483	3,724	10,145	1,274	1,489
Mayangone	9.78	25.04	205,403	33,738	337	1.0	10	198,113	38,807	20,311	11,236	1,876	4,521	547	316
Insein	13.52	34.61	311,200	53,324	533	1.0	21	305,283	61,676	34,320	15,126	2,344	7,212	1,648	1,026
Mingalardon	43.57	111.54	288,858	48,896	489	1.0	32	331,586	66,303	33,027	20,612	2,495	8,207	1,254	708
North Okkalapa	10.32	171.19	333,484	57,101	571	1.0	19	333,293	64,756	39,317	19,839	3,349	1,204	440	607
South Okkalapa	3.93	26.42	191,388	33,800	338	1.0	13	161,126	32,725	18,924	9,355	2,754	920	293	479
Thaketa	4.93	10.06	253,284	43,076	431	1.0	19	220,556	45,456	23,224	13,820	4,563	2,425	641	783
Dala	3.90	12.62	181,087	31,192	312	1.0	46	172,857	37,912	26,479	7,777	1,359	1,153	31	1,113
Seikgyikhanaungto	2.27	49.10	38,425	6,804	68	1.0	9	34,003	7,729	6,106	1,245	233	74	33	38
Old Suburbs			1,803,129	307,931	3,079	1.0	169	1,756,817	355,364	201,708	99,010	18,973	25,716	4,887	5,070
Shwe Pyi Thar	25.76	5.81	295,993	38,636	386	1.0	27	343,526	73,775	40,677	25,986	2,419	1,711	1,647	1,335
Hlaing Tharyar	26.32	15.80	488,768	73,668	737	1.0	29	687,867	148,711	58,666	81,378	2,097	1,066	1,941	3,563
North Dagon	23.27	65.95	221,200	36,919	369	1.0	27	203,948	42,704	23,079	14,753	2,468	724	907	773
South Dagon	30.55	67.38	370,403	58,779	588	1.0	39	371,646	76,984	40,931	26,549	3,038	1,264	837	2,365
East Dagon	35.15	59.57	145,505	22,734	227	1.0	60	165,628	33,913	18,870	10,090	1,310	872	559	2,212
Dagon Seikkan	32.97	78.21	120,161	21,741	217	1.0	48	167,448	37,905	19,894	14,446	932	602	841	1,190
New Suburbs			1,642,030	252,477	2,524	1.0	230	1,940,063	413,992	202,117	175,202	12,264	6,239	6,732	11,438
Kyauktan*		84.40	48,473	11,615	200	1.7	13	132,765	32,976	28,557	2,650	896	469	304	100
Thanlyin*		445.49	181,959	38,863	500	1.3	36	268,063	61,597	44,779	10,096	1,620	3,989	770	343
Hlegu*		785.23	50,793	11,642	200	1.7	14	270,741	58,023	46,846	3,118	1,437	5,365	713	544
Hmawbi*			83,719	17,697	300	1.7	18	244,607	56,469	42,215	5,755	1,871	4,784	1,416	428
Htantabin*			40,234	9,200	150	1.6	18	145,792	34,211	29,640	2,186	1,620	135	145	485
Twantay*			24,936	5,198	150	2.9	10	226,836	51,602	47,156	1,875	1,532	422	550	67
Periphery Area			430,114	94,215	1,500	1.7	109	1,288,804	294,878	239,193	25,680	8,976	15,164	3,898	1,967
Total in Study Area			5,572,242	919,835	10,000	1.1	785	6,500,235	1,368,556	820,415	382,172	50,328	74,550	18,969	22,122
Ownership					8,856	88.0%			820,415	820,415					
Rental					1,159	11.5%			526,019		382,172	50,328	74,550	18,969	
Others					54	0.5%			22,122						22,122

\* The population and the number of households in the Adjoining Areas are sourced from the Population by Ward reported to Township Office as of July 2012

Source: JICA Study Team based on the data of YCDC

## 5.4.2 Estimations of target households (1)

The target household purchasing low cost housing of MMK 10 mil. by using Low Interest Loan assumes household income of MMK0.3mil. /month or more is necessary. According to the survey by SUDP (2012 (JICA)), the survey results that household income of 22.2% of residential distressed households (households that do not own houses = rented housing households) is MMK 0.3 mil. /month or more, and in consideration of the census data, the number of target households in Yangon is presumed to be  $526,019 \times 22.2\% = 116,776$  households.

**Table 5-4 Household incomes in Yangon (SUDP(2012(JICA)))**

Q17 Total monthly household income (thousand kyat/month)																	
House ownership	No Answer	01: - 25	02: 25-50	03: 50-75	04: 75-100	05: 100-150	06: 150-200	7: 200-300	08: 300-400	09: 400-599	10: 500-600	11: 600-700	12: 700-800	13: 800-900	14: 900-1000	15: 1,000-	Total
0: No Answer			1														1
1: Self-owned	155	17	157	366	941	1,705	1,608	1,586	753	430	225	100	83	43	99	193	8,461
2: Government-owned house for rental		1	2	6	21	37	32	39	16	7	3	4		1	2	5	176
3: Private-owned house for rental or borrow	3		16	37	120	225	177	186	75	58	26	18	6	1	11	24	983
4: Uncertain ownership	5	2	8	21	53	111	83	66	25	10	4	1	2		3	1	395
5: Others			1	4	10	13	8	13	2	1		1					53
Total	163	20	185	434	1,145	2,091	1,908	1,890	871	506	258	124	91	45	115	223	10,069

	No Answer	Below 0.3 million				0.3-0.5 million				0.5-1.0 million				1.0 million -		
Total	163	7,673				1,377				633				223		10,069
	1.6%	76.2%				13.7%				6.3%				2.2%		
		77.8%								22.2%						

Ownership (1)+(4)	160	6,724				1,218				560				194		8,856
	1.6%	1.6%				1.6%				1.6%				1.9%		
	1.8%	75.9%				13.8%				6.3%				2.2%		
		77.7%								22.3%						

Rental (2)+(3)	3	899				156				72				29		1,159
	0.0%	8.9%				1.5%				0.7%				0.3%		
	0.3%	77.6%				13.5%				6.2%				2.5%		
		77.8%								22.2%						

Others (1)+(4)	0	50				3				1				0		54
	0.0%	0.5%				0.0%				0.0%				0.0%		
	0.0%	92.6%				5.6%				1.9%				0.0%		
		92.6%								7.4%						

## 5.4.1 Estimations of target households (2)

Of the survey in Yangon (number of interviews 1,260), households whose income were MMK 0.3 mil. /month or more, households resident in rental housing (2: Leased with payment and 3: Leased for free) was 273 households.



**Table 5-5 Target household's employment in Yangon**

Main Occupation of Household Head	Q8h: Type of Employment						Total
	1. Daily	2. Monthly	3. Yearly	4. lifetime	5. Own Biz	No Answer	
01. Government officer		6		7	1		14
02. Legislators, senior officials and managers		2					2
03. Professionals		2			5	1	8
04. Technical and associate professionals	1	2			8		11
05. Clerical Worker		1					1
06. Service workers, shop and market sales workers	10	19		1	31		61
07. Farmers, forestry workers and fishermen					1		1
08. Craft and related trades workers	1	1			11		13
09. Plant and machine operators and assemblers		4					4
10. Laborers and unskilled workers	7	4	1		5	1	18
11. Proprietors				1	24		25
12. Shop keepers					61		61
13. Armed forces occupation							
14. Housewife						5	5
15. Jobless						28	28
16. Students							
17. Retired				4		17	21
18. Others							
Total	19	41	1	13	147	52	273

Of the households eligible for Low Interest Loans there are 130 households with the condition with the monthly payment at the condition assumed for Low Interest Loan.

**Table 5-6 Target household's job type in Yangon**

Main Occupation of Household head	Job type					No Answer	Total
	1. Daily	2. Monthly	3. Yearly	4. lifetime	5. Own Biz		
01. Government officer		3					3
03. Professionals					2	1	3
04. Technical and associate professionals	1	2			5		8
05. Clerical Worker		1					1
06. Service workers, shop and market sales workers	4	9			18		31
07. Farmers, forestry workers and fishermen							0
08. Craft and related trades workers		1			5		6
09. Plant and machine operators and assemblers		2					2
10. Laborers and unskilled workers	3	1			2		6
11. Proprietors					15		15
12. Shop keepers					30		30
13. Armed forces occupation							0
14. Housewife						2	2
15. Jobless						16	16
16. Students							0
17. Retired						7	7
18. Others							0
Total	8	19	0	0	77	26	130

If households with employment form Daily Employment and No Answer are excluded from the 130 household, the number of target households will be 96 households. By estimating from these, from the Census data and the proportion assumed in this survey, the number of target households purchasing low cost housing of MMK 10 mil. using the Low Interest Loan in Yangon, will be estimated to be 41,064 households by the following.

$$116,776 \text{ households} \times 96 \text{ households} / 273 \text{ households} = 41,064 \text{ households}$$

Conditions for extracting Low Interest Loan target household are as follows

- Household monthly income MMK 0.3 mil. or more

- Resident needy (rental housing resident), and paying more than MMK70,000 as a housing rent per month
- Those that plan to purchase housings (desired housings are newly built housings) within 5 years, housing loan request at home purchase
- Employment form of head of household is Monthly, Yearly, Lifetime employment or on its own business

#### 5.4.2 Attributes of Target households

Organizing the properties of 96 households extracted as households for reference.

**Table 5-7 Age and Sex of the household head of Target households**

Main Occupation of Household head	Age of Household head										Sex of Household head		
	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	71-75	Male	Female	Total
01. Government officer		1					2				3		3
03. Professionals			1	1							2		2
04. Technical and associate professionals			1		3	1		1	1		7		7
05. Clerical Worker						1					1		1
06. Service workers, shop and market sales workers		1	4	7	3	3	6	1	2		24	3	27
08. Craft and related trades workers			1	1	2		1	1			5	1	6
09. Plant and machine operators and assemblers					2						2		2
10. Laborers and unskilled workers					1			1	1		3		3
11. Proprietors		3	2	3		3	3	1			14	1	15
12. Shop keepers	1	2	6	2	6	4	2	4	2	1	27	3	30
Total	1	7	15	14	17	12	14	9	6	1	88	8	96

**Table 5-8 Type of housings desired by the Targeted households**

Main Occupation of Household head	Type of Housing				
	1: Apartment	2: High rise building	3: Condominium	4: Detached house	Total
01. Government officer				3	3
02. Legislators, senior officials and managers					0
03. Professionals	1			1	2
04. Technical and associate professionals	3			1	7
05. Clerical Worker				1	1
06. Service workers, shop and market sales workers	5		3	3	16
08. Craft and related trades workers	1			2	6
09. Plant and machine operators and assemblers	1			1	2
10. Laborers and unskilled workers	1		2		3
11. Proprietors	4			2	9
12. Shop keepers	12		1	3	14
Total	28		6	11	51

**Table 5-9 Present and future residential area of the Target households**

Current location	Future location					
	01. CBD area	02. Inner city	03. Outer city	04. Old suburbs	05. New suburbs	06. Periphery area
01. CBD area	5	1		1		
02. Inner city	1	40		6	3	
03. Outer city			4	2	1	
04. Old suburbs				12	1	1
05. New suburbs		4		3	11	
Total	6	45	4	24	16	1

**Table 5-10 Residential location and type of housings desired of the Ttarget households**

Future location	Type of Housing				
	1: Apartment	2: High rise building	3: Condominium	4: Detached house	Total
01. CBD area	2		2	2	6
02. Inner city	18	3	7	17	45
03. Outer city	2			2	4
04. Old suburbs	3	2	2	17	24
05. New suburbs	3	1		12	16
06. Periphery area				1	1
Total	28	6	11	51	96

**Table 5-11 Housing area and type of housing desired of the Target households**

Future housing type	Q30: How many square feet (ft2) do you need for living space							Total
	1: - 800	2: 801-1200	3: 1201-2400	4: 2401-3600	5: 3601-4800	6: 4801-	No Answer	
01. Apartment	4	18	6					28
02: High rise building	2	3	1					6
03: Condominium	1	5	4		1			11
04: Detached house	14	20	14	2		1		51
Total	21	46	25	2	1	1	0	96

#### 5.4.3 Effect of the Low Interest Loan (1)

Comparing the current housing loan and the Low Interest Loan when purchasing low cost housing of MMK 10 mil., with a 30% down payment and a fee of 1% will be as follows.

**Table 5-12 Comparison between housing loan and Low Interest Loan**

	Fee	Duration	Interest	Monthly installment	Standard household monthly income
Housing loan	1%	8years	12.0%	MMK118,601	MMK395,336
Low Interest Loan	1%	15years	8.5%	MMK70,948	MMK236,592

Of the 96 households covered by the Low Interest Loan in this chapter, 32 households, which is one-third of the 96 households, have standard household monthly income of MMK 0.4 mil., with monthly rent of MMK118, 601 and will not be considered to be subject of housing loan. In other words, by introducing the Low Interest Loan, the target for housing loans will increase by 1.5 times or 50%.

**Table 5-13 Target of the housing loan and Low Interest Loan**

Monthly rent (house)	HH Monthly Income (2017) (thousand kyat / month)								Total
	8: 300-400	9: 400-500	10: 500-600	11: 600-700	12: 700-800	13: 800-900	14: 900-1000	15: 1000-	
0	1	1		1					3
800			1						1
6,100								1	1
7,000							1		1
20,000	1								1
25,000		1							1
30,000	2		1						3
35,000	2				1		1		4
40,000	1	1					1		3
45,000	1	1							2
50,000	5	3		1	1				10
60,000	3	4							7
65,000	1	2			1				4
70,000	2	2							4
80,000		2	1	1					4
90,000		1					1		2
100,000	6		4		1	1	1	1	14
110,000			1						1
120,000	1	3	1		1				6
130,000			1						1
140,000			1			1		1	3
150,000	1	3	2		3	2	2	1	14
160,000			1						1
180,000	1	1			1				3
200,000	2	1		4		1	1	2	11
230,000	1								1
250,000	1		2	2	1		1	2	9
280,000					1	1			2
300,000		1			1	1	1	3	7
340,000						1			1
350,000					1		1	2	4
400,000			1						1
450,000			1						1
500,000								1	1
600,000								2	2
700,000								1	1
840,000					1				1
1,500,000					1				1
(空白)	3	6	4	2		3	1	5	24
Total	35	33	22	11	15	11	12	22	161
Housing Loan		9	10	6	11	7	6	15	64
TSL Housing Loan	15	14	16	7	12	8	8	16	96

#### 5.4.4 Effect of the Low Interest Loan (2)

The number of households in Greater Yangon is 1,368,556 (according to 2014 Census), and the targeted household of the Low Interest Loan with a monthly income of 0.3million to 0.7 million MMK (gray area in the table below) without owning a house are estimated to be 93,949 households.

**Table 5-14 Household income without housing ownership**

Average Monthly Household Income of 2017 in Greater Yangon

Average Monthly Household Income of 2017 (unit: million MMK)	Housing ownership (住宅の所有・非所有)			
	Owned	Not Owned	Others	Total(合計)
01: below 0.025	1,760	454	0	2,214
02: 0.025 - 0.050	15,286	8,169	819	24,274
03: 0.050001 - 0.075	35,851	19,516	1,639	57,006
04: 0.075001 - 0.100	92,084	63,994	4,097	160,175
05: 0.100001 - 0.150	168,233	118,910	5,326	292,469
06: 0.150001 - 0.200	156,653	94,856	3,277	254,786
07: 0.200001 - 0.300	153,040	102,118	5,326	260,484
08: 0.300001 - 0.400	72,073	41,301	819	114,193
09: 0.400001 - 0.500	40,761	29,501	410	70,672
10: 0.500001 - 0.600	21,214	13,162	0	34,376
11: 0.600001 - 0.700	9,357	9,985	410	19,752
12: 0.700001 - 0.800	7,874	2,723	0	10,597
13: 0.800001 - 0.900	3,983	908	0	4,891
14: 0.900001 - 1.000	9,449	5,900	0	15,349
15: above 1.000	17,972	13,162	0	31,134
Unclear	14,822	1,362	0	16,184
Total	820,415	526,019	22,122	1,368,556

Data Source: Total number of HH by housing ownership based on 2014 Census (Myanmar)

Number of HH by average monthly HH income based on the propotion of SUDP (2012 JICA)

Of the 93,949 households which will be the target of Low Interest Loan, the following households are estimated to be 75,184 households based on the results of this housing demand survey.

- 1) Households wishing to acquire new housing within 5 years
- 2) Households wishing to use housing loan when acquiring housing

**Table 5-15 Estimated household number with certain condition**

Number of households who want to buy a new housing within 5 years

Average Monthly Household Income of 2017 (unit: million MMK)	Not Owned	Want to buy a new housing within 5 years with housing mortgage	
08: 0.300001 - 0.400	41,301	31,770	77%
09: 0.400001 - 0.500	29,501	25,501	86%
10: 0.500001 - 0.600	13,162	11,105	84%
11: 0.600001 - 0.700	9,985	6,808	68%
Total (合計)	93,949	75,184	80%

Data Source: Housing Information Survey 2017 (JICA)

In acquiring the Low Cost housing with the housing price of 1.5million MMK, 30% down payment, 1% of the mortgage amount as the mortgage fee, the installment amount of the month for the current mortgage (10 year installment · 12.0%) and the Low Interest Loan (15 year installment · 8.5%) will be as follows.

Note: to analyze under severe conditions, the price of the housing is set to be 1.5million MMK

**Table 5-16 Comparison between the current housing loan and Low Interest Loan**

	Housing Price	LTV	Down payment	Remaining	Loan Fee	Loan Amount	Duration (year)	Interest (%/year)	Monthly payment	Divide by 30%
Low cost+TSL (1)	15,000,000	30%	4,500,000	10,500,000	1%	10,605,000	15	8.50%	106,422	354,740
Low cost+Current	15,000,000	30%	4,500,000	10,500,000	1%	10,605,000	10	12.00%	156,410	521,367

Comparison of subjects of current mortgage loan and TS Mortgage Loan

The conditions of the mortgage loan targeted household are set as “household monthly income×30%”> “monthly installment” (15, 569 households> 57, 711 households)

In addition, “the monthly housing rent payment amount”> “Monthly installment” (4,368 households> 17,642 households)

**Table 5-17 Comparison of estimated household number with certain condition**

Monthly income \* 30% &gt; Monthly repayment

Average Monthly Household Income of 2017 (unit: million MMK)	HH want to buy new housing	Monthly income*30% > Monthly repayment		Current housing rent > Monthly repayment	
		Current	TSL	Current	TSL
08: 0.300001 - 0.400	31,770	0	14,297	0	2,033
09: 0.400001 - 0.500	25,501	0	25,501	0	7,000
10: 0.500001 - 0.600	11,105	8,761	11,105	1,645	4,524
11: 0.600001 - 0.700	6,808	6,808	6,808	2,723	4,085
Total	75,184	15,569	57,711	4,368	17,642

Data Source: Housing Information Survey 2017 (JICA)

When in cases the employment form of the head of householders is 02: monthly employment, 03: yearly employment, 04: lifetime employment or 05: self-employed are extracted and 01: day hiring and 06: other are avoided will be as followed.

When the condition of the mortgage loan targeted person is set as “household monthly income x 30 %”> “monthly installment” (12,150 households> 31,560 households)

In addition, “the monthly housing rent payment amount”>“monthly installment” (4,368 households> 13,780 households)

**Table 5-18 Comparison of estimated household number with certain condition (2)**

Type of employment: 02: Monthly, 03: Yearly, 04: Lifetime, 05: Own business

Average Monthly Household Income of 2017 (unit: million MMK)	HH want to buy new housing	Monthly income*30% > Monthly repayment		Current housing rent > Monthly repayment	
		Current	TSL	Current	TSL
08: 0.300001 - 0.400	31,770	0	1,017	0	2,033
09: 0.400001 - 0.500	25,501	0	16,501	0	4,500
10: 0.500001 - 0.600	11,105	7,157	9,049	1,645	4,524
11: 0.600001 - 0.700	6,808	4,993	4,993	2,723	2,723
Total	75,184	12,150	31,560	4,368	13,780

Data Source: Housing Information Survey 2017 (JICA)

The table below shows the household monthly payment rent fee and household monthly income (2017) of those that do not own a house, and wish to acquire a new housing within 5 years, and wish to use a mortgage loan at the time of acquisition.

**Table 5-19 Monthly rent fee and income of certain condition**

Monthly rent (house)	Q10 Average monthly household income of 2017 (million Kyat/month)								
	8: 0.300 - 0.400	9: 0.400 - 0.500	10: 0.500 - 0.600	11: 0.600 - 0.700	12: 0.700 - 0.800	13: 0.800 - 0.900	14: 0.900 - 1.000	15: 1.000 -	Total
0	1	1		1					3
800			1						1
6,100								1	1
7,000							1		1
10,000		1							1
20,000	2								2
25,000		1							1
30,000	2		1						3
35,000	2				1		1		4
40,000	2	1	1	1			1		6
45,000	1	1							2
50,000	8	5		1	1				15
60,000	6	4				1	1		12
65,000	1	3			1				5
70,000	2	6	1				1		10
80,000	1	3	2	1					7
85,000	1								1
90,000		3					1		4
100,000	8	2	6		2	1	1	1	21
110,000		1	1						2
120,000	1	3	1	1	1				7
130,000			1	1					2
140,000			1			1		1	3
150,000	1	6	2	1	3	3	2	2	20
160,000			1			1			2
180,000	1	1			2				4
200,000	2	1		4	1	2	1	2	13
230,000	1								1
240,000								1	1
250,000	1		2	2	1		1	2	9
280,000					1	1			2
300,000		1			1	1	1	3	7
340,000						1			1
350,000					1		1	2	4
400,000			1						1
450,000			1						1
500,000		1						1	2
600,000								2	2
700,000								1	1
840,000					1				1
1,500,000					1				1
Blank (including 3. Leased for free)	6	6	4	2	3	3	1	6	31
Total	50	51	27	15	21	15	14	25	218

Low cost +TSL mo	22.5	51.0	27.0	15.0					115.5
	3.2	14.0	11.0	9.0					37.2
Low cost + current mortgage loan			21.3	15.0					36.3
			4.0	6.0					10.0
Monthly rent (house)	Q10 Average monthly household income of 2017 (million Kyat/month)								
	8: 0.300 - 0.400	9: 0.400 - 0.500	10: 0.500 - 0.600	11: 0.600 - 0.700	12: 0.700 - 0.800	13: 0.800 - 0.900	14: 0.900 - 1.000	15: 1.000 -	Total
	0.355		0.521						
	TSL mortgage		Current mortgage						

The table below shows the Household monthly payment rent fee and household monthly income (2017)



of those that do not own a house, and wish to acquire a new housing within 5 years, wish to use a mortgage loan at the time of acquisition, and the employment form of the head of householders is 02: monthly employment, 03: yearly employment, 04: lifetime employment or 05: self-employed are extracted.

**Table 5-20 Monthly rent fee and income of certain condition (2)**

Monthly rent (house)	Q10 Average monthly household income of 2017 (million Kyat/month)								
	8: 0.300 - 0.400	9: 0.400 - 0.500	10: 0.500 - 0.600	11: 0.600 - 0.700	12: 0.700 - 0.800	13: 0.800 - 0.900	14: 0.900 - 1.000	15: 1.000 -	Total
0	1	1		1					3
800			1						1
6,100								1	1
7,000							1		1
20,000	1								1
25,000		1							1
30,000	2		1						3
35,000	2				1		1		4
40,000	1	1					1		3
45,000	1	1							2
50,000	5	3		1	1				10
60,000	3	4							7
65,000	1	2			1				4
70,000	2	2							4
80,000		2	1	1					4
90,000		1					1		2
100,000	6		4		1	1	1	1	14
110,000			1						1
120,000	1	3	1		1				6
130,000			1						1
140,000			1			1		1	3
150,000	1	3	2		3	2	2	1	14
160,000			1						1
180,000	1	1			1				3
200,000	2	1		4		1	1	2	11
230,000	1								1
250,000	1		2	2	1		1	2	9
280,000					1	1			2
300,000		1			1	1	1	3	7
340,000						1			1
350,000					1		1	2	4
400,000			1						1
450,000			1						1
500,000								1	1
600,000								2	2
700,000								1	1
840,000					1				1
1,500,000					1				1
Blank (including 3.L eased for free)	3	6	4	2		3	1	5	24
Total	35	33	22	11	15	11	12	22	161

TSL

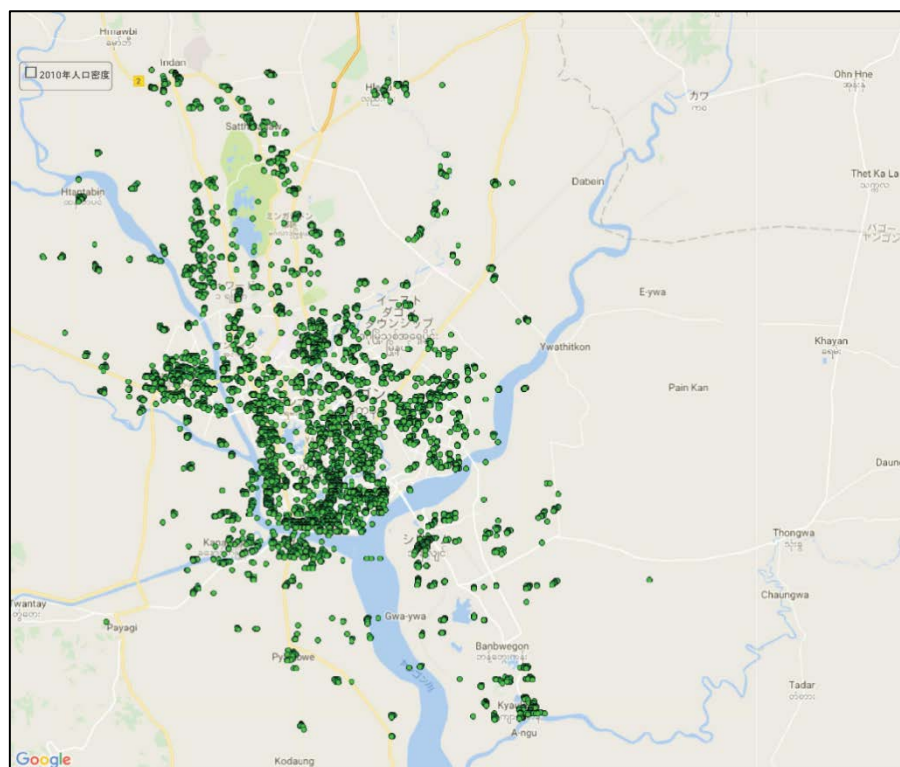
106,422

Current

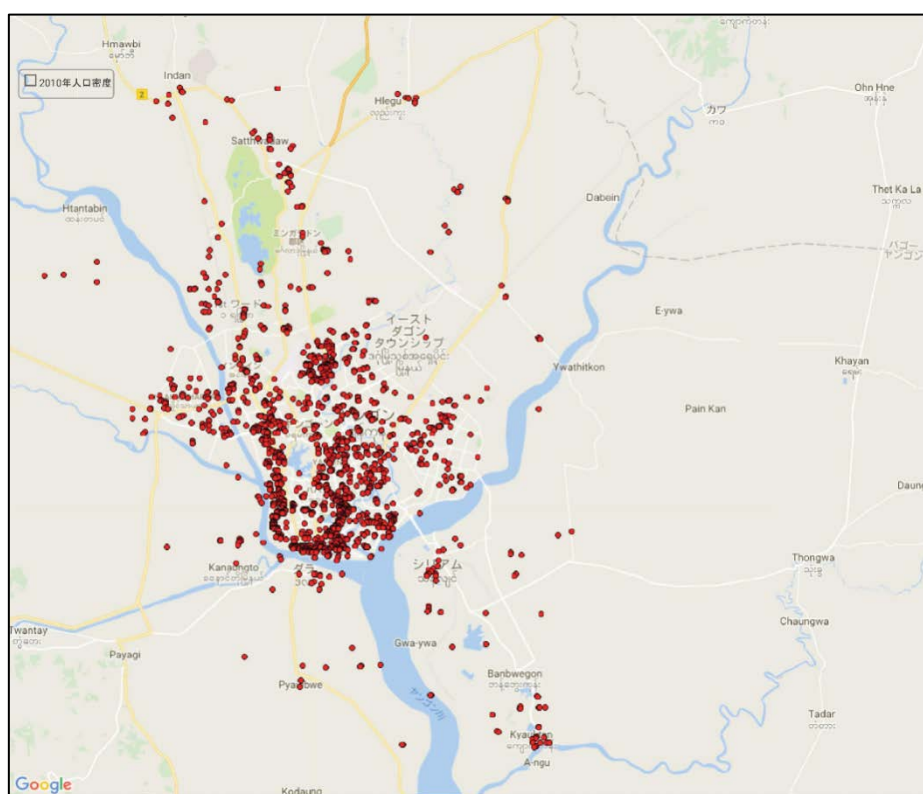
156,410

Low cost +TSL mo	1.6	33.0	22.0	11.0					67.6
	3.2	9.0	11.0	6.0					29.2
Low cost + current mortgage loan			17.4	11.0					28.4
			4.0	6.0					10.0

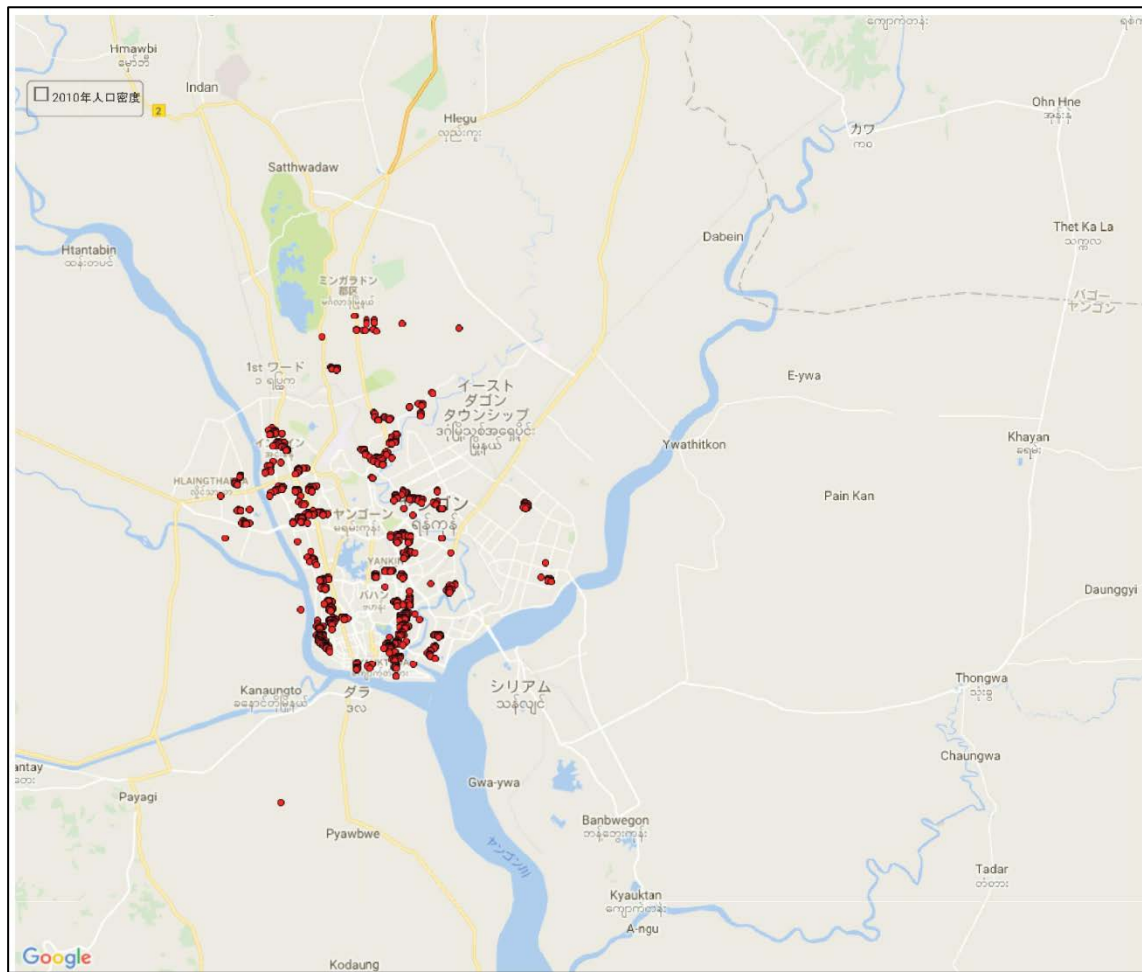
Monthly rent (house)	Q10 Average monthly household income of 2017 (million Kyat/month)								
	8: 0.300 - 0.400	9: 0.400 - 0.500	10: 0.500 - 0.600	11: 0.600 - 0.700	12: 0.700 - 0.800	13: 0.800 - 0.900	14: 0.900 - 1.000	15: 1.000 -	Total
	0.355		0.521						
	TSL mortgage		Current mortgage						



**Figure 5-89 Distribution map of SUDP (2012JICA) HIS interview in Yangon (Reference)**



**Figure 5-90 Distribution map of monthly income > 0.3mil. at SUDP (2012JICA) HIS interview in Yangon (Reference)**



**Figure 5-91 Distribution map of monthly income>0.3mil. at this survey (Reference)**

\*The map was prepared by HP (<http://ktgis.net/gcode/lonlatmapping.html>) of Kenji Tani laboratory (Saitama University).

## **Chapter 6 CONSIDERATION OF PROJECT SCHEME FOR HOUSING FINANCE SYSTEM**

### **6.1 Discussion for the scheme**

As explained in the previous chapters, finance services for housing purchasers have been already provided by CHDB and other private banks. However, application of such services are still limited. Development of housing finance system with lower interest rate for longer term, which helps low to middle income people for their housing purchase, is considered one of the important policy agenda today. To overcome this issue, it will be essential for financial institutions which provides housing finance to procure such finance source.

One of the major schemes of Japanese ODA is Two Step Loan (TSL). This is by letting receiving governmental institution of Japanese ODA loan for low interest and longer term to financial institutions so that such financial institution are able to provide special loans to individuals and Small and Medium-sized Enterprise(SME) for promotion of specific policies. In Myanmar, a TSL project to provide financial support for SME has been already commenced.

Assuming that application of TSL would be effective for expansion of housing finance system, scheme for such project was discussed as follows.

#### **6.1.1 Possible combination of entities for housing supply and fund supply**

On this study, the following are set as priorities: 1) Establishment and introduction of housing finance system at the earliest possible time mainly for buyers of Low Cost Housing; and 2) in order to achieve 1) above, utilising the existing DUHD-CHDB scheme to the most extent possible, where CHDB provides loan for buyers of such housing that are built by DUHD. In relation to TSL, it was also agreed that the existing TSL scheme for SME should be refereed.

However, even if the existing DUHD-CHDB scheme might be the starting point, considering that the supplier of the Low Cost housing will not be limited only to DUHD for ever and that likewise in the existing TSL for SME private banks will participate in this scheme in the future, it was recognised that the project structure need to be discussed focusing such future possibilities.

Table6-1 shows the combination of potential suppliers of housing as well as financial institutions which shall be referred to in the discussion. For expansion from the 1st Batch, certain issues to be solved are observed. Thus, such solution will be the pre-condition for the expansion of the scheme. Such issues as well as scenario for expansion could be explained as follows:

**Table 6-1 Combination of Housing Suppliers and Financial institutions to join**

	DUHD	Reginal Govts	Private Developers
CHDB	Pattern1-1 (1st Batch)	Pattern2-1 Point②③	Pattern3-1 Point②③④
Private Banks	Pattern 1-2 Point①②	Pattern2-2 Point②③	Pattern3-2 Point②③④

Issue1: Risk Management (Division of Roles among DUHD, CHDB and Private Banks)

<Points to consider>

**Point①** : If a tri-party agreement, which shall be similar to the existing tri-party agreement among DUHD, CHDB and end borrowers, is concluded among DUHD, private banks and end borrower, when loan provision for the buyer of the DUHD housings are opened to private banks.

**Point②** : Which institution shall be responsible for screening of end borrowers: DUHD, developers or suppliers of the target housing including regional governments, or private banks participating in the scheme; or should private banks conduct the preliminary screening on document only, then judgement of each applicants shall be implemented only by CHDB.

<Discussion regarding Issue1>

Under the existing DUHD-CHDB scheme (Pattern1-1), a tri-party agreement is concluded among DUHD, CHDB and buyer of the housing (end borrower) . In case of default by the end borrower, based on the tri-party agreement, DUHD resell the property, then collect outstanding balance. Therefore, CHDB is not taking any credit risk of the borrower as a lending institution. Since this scheme is favorable for lenders of mortgage loan under the current legal system in Myanmar where setting of effective collateral on properties is practically impossible, private banks may also request to conclude a tri-party agreement similar to the existing one among DUHD, CHDB and the end borrower as the best solution in their credit risk management, when private banks are invited to provide loan for buyers of housings built and sold by DUHD.

However, such possibility was clearly denied by both DUHD and CHDB when discussed with them in May 2017. Their opinion was such that it seems unlikely that private banks seriously want to participate in the mortgage loan project targeting low income people and that this is rather a policy issue to be taken care by public organizations like DUHD and CHDB, which made the two institutions implement the scheme under a special allocation of responsibilities. It may also need to be considered because DUHD is a major shareholder of CHDB owning 25% of its share and the primary purpose of the establishment of CHDB was to assist promotion of housing built by DUHD, DUHD and CHDB would like to keep CHDB distinguished from other private banks.

One of the concerns of Japanese side on this issue is that the shortage of processing capacity of CHDB over a big demand may affect the actual disburse of funding, if CHDB is nominated as the only PFI on this project. CHDB stated however that this may not be an issue since DUHD is now planning to increase

staff to be assigned to mortgage loan.

Another significant point to discuss for expansion of the finance scheme in the future is division of roles between CHDB and private banks, especially screening of applicant and allocation of relevant credit risk (Point②).

Under the current scheme based on the tri-party agreement, practically DUHD is taking the credit risk. Therefore, such discussion is required if developer (supplier) of the housing should conduct screening and take the credit risk or screening should hand over to financial institution who will provide finance, separating the sales and provision of loan.

As explained in Chapter 4, both patterns of division of roles exist in the current housing finance being offered by some private banks. However, in order to keep risk management properly even after the target of the housing finance is expanded, such scheme where lenders conduct screening by themselves and take relevant risks following their own decision shall be established, even including the scheme where CHDB is involved. This requires private banks enough capacity to conduct screening by themselves and take relevant risks by themselves.

Another possibility is that private banks just accept application forms for housing finance and conduct preliminary screening based on simple criteria, then leave the main screening to CHDB. However, either CHDB or private banks have not shown positive attitude so far for in discussion with them.

## **Issue2: Quality Control**

<Points to consider>

**Point③** : Which institution shall be responsible for quality control of the target housings: suppliers of such housing or third parties independent from the suppliers? It would be very important to establish such third party institution if housings built by private developers are targeted for the housing finance.

<Discussion regarding Issue2>

The current situation and the result of analysis regarding the quality of the target housing is as explained in Chapter3. This implies that even those expected as the target for the 1st Batch has many points need to be improved in the future. Therefore, before expanding the target of the housing finance to those supplied by companies other than DUHD, survey on the current condition regarding the quality of such new target shall be conducted first, then scheme which enable to secure certain level of quality on those housing shall be established.

While necessity for a nationwide programme to improve overall quality of building in Myanmar is recognized, it is also important to establish a certain scheme soon to secure required quality for the target housing for the TSL housing finance. Therefore, it could be a realistic solution for a time being to install function relating to quality control in an entire management system for the project. This will be explained at a latter part.

## **Issue3 : Collateral**

<Points to consider>

**Point④** : If collateral legally effective could be set for the case of default by end borrower?

<Discussion regarding Issue3>

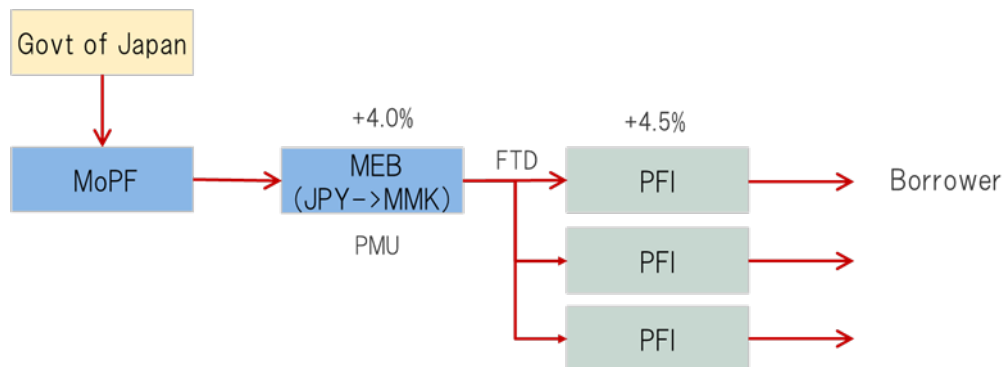
As explained in Chapter 4, the current legal system in Myanmar for securing collateral is not equipped enough. In order to include housing built by private developers as the target of TSL housing finance, legalization and amendment of relevant laws and regulations regarding pro-rata title, setting collateral and proper procedure for legal actions for default loan are necessary (detail shall be explained in Chapter 8). It will take longer time and certain cost. However, these issues must be tackled to make the housing related issues in Myanmar improved drastically. Hence, this subject also need to be improved together with issues2.

### 6.1.2 Consideration of the Implementation Scheme

In consideration of the implementation scheme of the TS Mortgage Loan System, realising loan disbursement as soon as possible is set as the first priority. For this sake, the existing loan scheme should be adopted to the extent possible: for TSL the preceding scheme of TSL for SME is referred to and for mortgage loan schemes used by CHDB for buyer of housing built and sold by DUHD are adopted as the basis of the scheme.

#### (1) Project Scheme of TSL for SME

For TSL for SME, the following scheme is adopted:



**Figure 6-1 Scheme of TSL for SME**

- MEB is as PMU responsible for monitoring of each PFIs, request of disbursement for JICA, execution of Fund Management. Exchange risk between JPY and MMK is also taken by MEB.
- MEB is taking 4% interest for the roles and risk mentioned above. Transfer of the fund from MEB to PFI is made not by loan from MEB but by deposit from MEB to PFIs (This process is called FTD: Fund Transfer by Deposit.)
- Underwriting and application process are executed by each private banks which is participating in the scheme as PFI. Credit risk of borrowers are born by each PFI while each of them is taking 4.5% interest.
- According to interview to a PFI, most borrowers in this project are small-medium size entrepreneurs, which have track record of borrowing from the bank. Likewise the existing lending, almost same process is applied for the screening process and collateral is set mainly on immovable. However, for

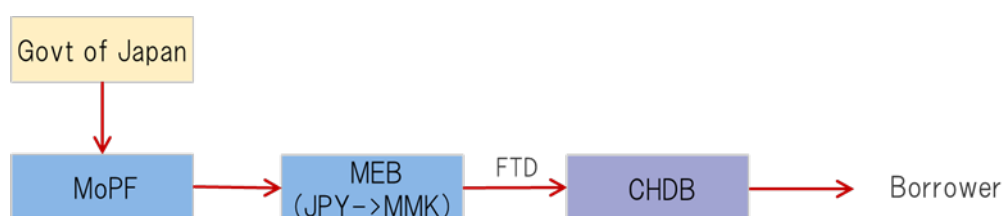


those who would borrow from the bank for the first time, detail examination is carefully conducted.

- The interest rate for the end-borrower is at 8.5%. This was decided by such policy of JICA as that interest rate should not be lower than one decided by the CBM.
- This loan began with only one PFI (Small & Medium Industrial Development Bank), then expanded to 6 PFIs. More PFI are under selection process as of June 2017.

## (2) Scheme for 1st Batch

As stated above, the combination of the existing scheme of TSL for SME and that of mortgage loan by CHDB is considered the most preferable for the 1st Batch in order for the TS mortgage loan to be disbursed as early as possible. Fund transfer from MEB to CHDB will be by FTD and CHDB will be the only PFI providing fund using the existing loan scheme.



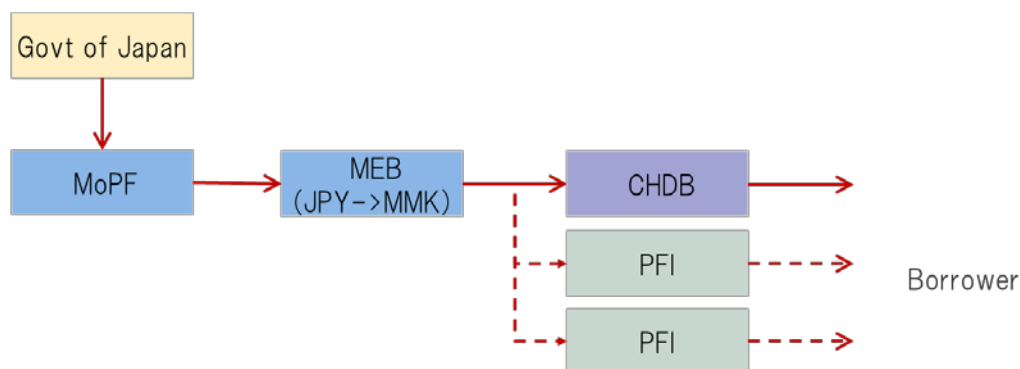
**Figure 6-2 Scheme of TS Mortgage Loan 1st Batch**

For TS mortgage loan, not only management and monitoring of financial issues but also technical issues relating to quality management and improvement of target housings. Therefore, it was agreed that PMU function should be kept in MEB while technical issues such as approval of target housing shall be managed by Technical Sub Committee, which will be established under and required approval of Steering Committee.

## (3) Issues related to Participation of private banks as PFIs

An issue to be considered once the scheme for the 1st Batch is well operated is how to assist private banks to participate in the Project, expecting the increase in the capacity of borrowers may lead to the increase in the use of the mortgage loan. As mentioned in the previous chapter, there are some private banks which are already providing funding for housing buyers. When the study team asked such private banks if they would like to participate in the Project once established, they clearly presented their interest.

The project scheme for this stage will be as shown below.



**Figure 6-3 Expecting Scheme after participation of private banks**

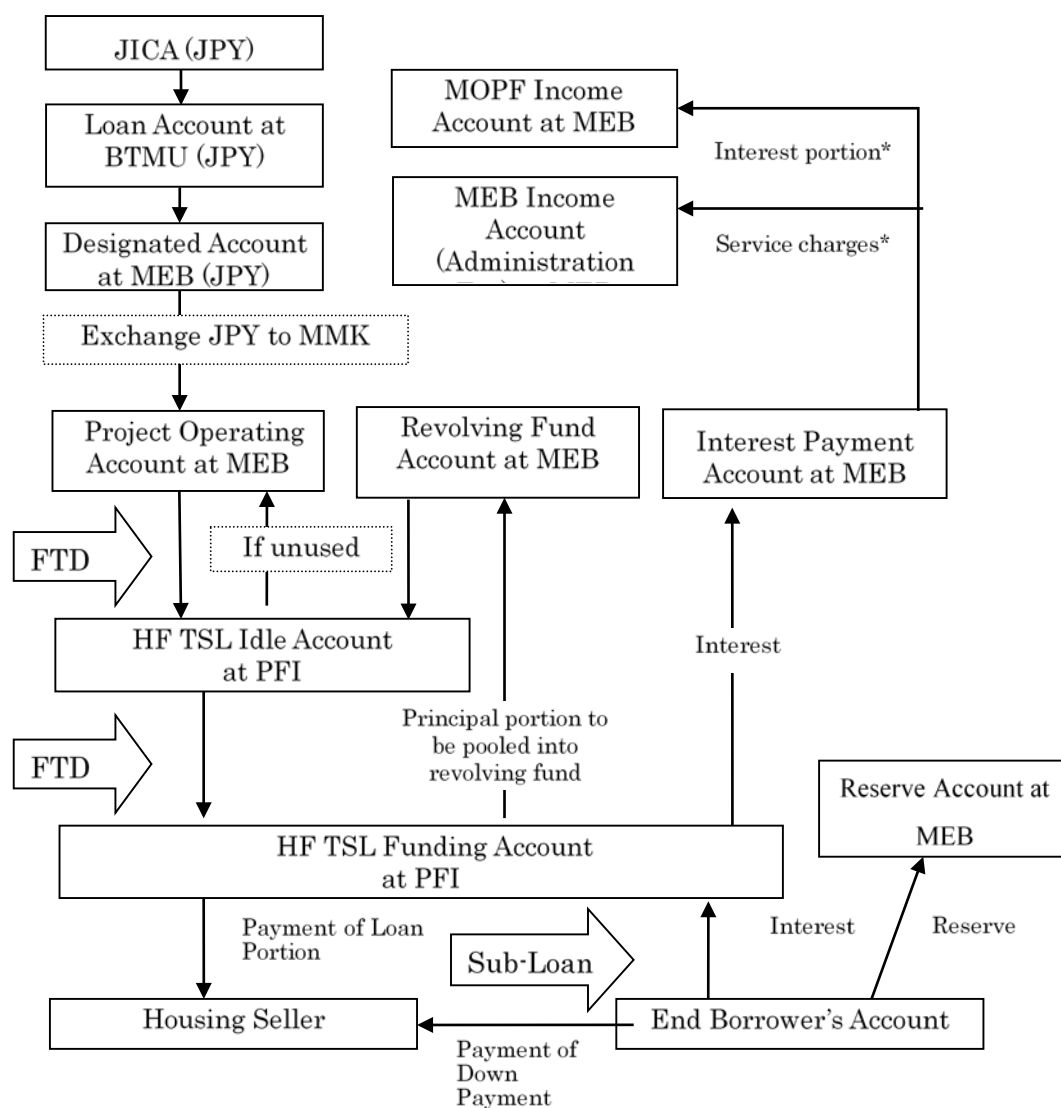
However, through discussion with DUHD and CHDB, an important issue regarding the target housing was identified.

As explained before, CHDB is under strong influence of MoC. It should be also considered that CHDB was originally established to support construction and sale of housing built by DUHD. With such special relation between DUHD and CHDB considered, DUHD as the developer clearly denied inviting a private bank as a partner and conclude an existing tri-party agreement, which is the basis of the current mortgage loan by CHDB. CHDB is also not considering the necessity of sharing its function with private banks. They tend to manage the increasing demand for the loan provision, if happens in the future, rather by increasing number of staff involved and reinforcing its institutional capacity.

Therefore, for participation of private banks, either provision of mortgage loan to DUHD housing by two-party agreement or approval of housings built by local government including YRG or by private developers as the target of the Project shall be a condition. In order to make a two-party agreement practically feasible, improvement in legal structure regarding registration, foreclosure etc. is essential, while it does not seem feasible to make the housing built by other public organisation or private developers before certain framework is developed to assure quality of these housings. It means that participation of private banks may not be realised soon. Considering that legalisation of apartment law and others, which may solve the legal issues above, are currently being prepared, while setting up systems for quality assurance shall take much longer, it is expected that two-party agreement will come earlier, then it will trigger participation of private banks to this scheme.

### 6.1.3 Discussion about Fund Flow

In TSL for SME, FTD (Fund Transfer by Deposit) was adopted, where MEB deposit fund in a designated account in PFIs then using these deposit as funding source the PFIs provide mortgage loan to the end borrowers. According to the Consultant team involved in the scheme development of the TSL for SME, FTD scheme was proposed by the PFIs to secure prompt fund transfer from MED to PFIs upon request from PFIs. To make this scheme effective, the following conditions were accepted by the CBM: 1) the interest rate for the deposit from MEB to PFIs should be much lower than the minimum interest rate for deposit; and 2) the maximum lending ratio to deposit could be 100% where it should be usually up to 70%.



**Figure 6-4 Fund Flow for TS Mortgage Loan**

However, such view that the fund transfer should be made by loan from MEB to PFIs rather than FTD was also discussed. It was because PFIs might have to refund in case it was requested to do so by MEB, if the fund was provided to the PFIs as deposit from MEB. The major points to discuss on this matter are shown in Table 6-2 below.

After these discussion, it was agreed that fund transfer from MEB to PFI shall be made by FTD.

**Table 6-2 Points to discuss: Comparison between FTD and Loan**

Points	Deposit(FTD)	Loan
Restriction on borrowing	N/A	Is there any limit for borrowing by CHDB considering its financial condition?
Procedure for lending	N/A	PFIs concern if lending procedure from MEB to PFIs may take a long time, which might affect loan provision from PFIs to the end borrower.(This is one of the reasons PFIs requested FTD for TSL for SME)1). ➔ It will not take a long time for each disbursement if the maximum of the accumulated amount is decided in the beginning.
Restriction on Sublease	PFIs is allowed to sublease up to 70% of its deposit? ➔ Such restriction was applied when TSL for SME started. Then, the TSL was exempted from this restriction after negotiation between PFI and CBM1). ➔ Such restriction shall be applied only to commercial loans less than 1 year. This is not applied to development loans which utilize paid-in capital and loan from MEB2). This is now applied to commercial banks (private) too.	Same as on the left ➔ In case, restriction on loan-deposit ratio was applied, the deposit amount need to be increased.
Interest	Can the interest rate for deposit from MEB be 4%? ➔ CBM agreed to accept it as an exception.	Can the interest rate for lending from MEB be 4%, which is lower than the minimum? ➔ It need to be negotiated with CBM as an exception same as FTD.
Repayment to MEB	If deposit, MEB may have a right to withdraw the fund anytime. If fixed term deposit, repayment from PFI to MEB may not be made, which would prevent fund flow to Revolving Fund. ➔ A rule for withdrawal should be made at S/C and monitored. ➔ With such conditions and rules, practically no difference between 'deposit' and 'loan'	Repayment shall be made based on the schedule agreed beforehand.

1) Based on interview to a consultant involved in the development of TSL for SME.

2) Confirmed by CHDB in Aug2017

#### 6.1.4 Discussion about interest rate

##### (1) CBM regulation over interest rate

One of the purpose of introducing housing finance system supported by TSL is to enable financial institutions to procure source finding for lower interest, then offers mortgage loan to the end-borrower for much lower interest. This will help household with lower income which may not be able to apply for otherwise.

However, banks cannot decide interest rate by themselves, as interest rate both for deposit and lending are currently regulated by CBM.

For consideration of the interest rate for the end-borrower of the TS mortgage loan, rules and regulation set by CBM were checked by interview. The result is as follows:

- The regulations currently set by CBM are only i) the interest rate for deposit shall be over 8%; and ii) the interest rate for lending shall not be over 13%.
- To secure soundness of financial institutions, for lending for more than 1 year, funding source covering the term and volume is required.
- The reason why there is few fixed-term deposit over 1 year is that the standard interest rate for 1 year fixed deposit is around 10% and that with such condition reasonable interest rate for more than 1 year cannot be offered. Absence of longer term deposit results in unavailability of longer term lending.
- Once financial institution procures longer term finance by TSL, the interest rate for the end-borrower of the loan using the TSL can be set by PFI's decision as long as it is not exceeding 13%.

CBM mentioned that 8% was not a bar for interest for lending but for deposit: i.e. the interest rate for the end-borrower need not be necessarily bound by this percentage. It emphasised rather that it should be decided considering sustainability of the loan scheme, proper evaluation of risk management and so on.

##### (2) Comment from IMF

Comment from local representative office of IMF was also sought. The point is as follows:

- Request for lowering interest rate is often heard nationally, which is also a wish of National League for Democracy (NLD). For securing sustainability of financial market of Myanmar, however, maximum interest for lending should be rather raised so that the necessary risk premium could be properly added on.
- Considering the possibility that various financial instruments will be made following the

amendment of the revision of the Financial Law, interest rate for each financial instrument should be decided based on their feature. Likewise, it could be worth considering to differentiate the interest rate of this TS mortgage loan based on the repayment term.

- In most precedents of two step loans adopted in other countries, interest rate were set at such level that were slightly lower than the those for ordinary lending to avoid skewing the market.

IMF recognised the people's wish for lower interest loans. As found in the comment above, thinking of influence in the future, the position of IMF was not to recommend making the interest rate significantly lower than the current market level even though the cheap source funding through TSL may enables it possible.

### (3) Discussion among the concerned parties and the conclusion

In parallel with interviews to CBM and IMF, discussion to decide the interest of this TS mortgage loan was repeatedly made.

CHDB once mentioned that they wanted to make the interest rate as low as possible, as CHDB saw it an urgent issue enabling more people to buy their own house. CHDB suggested to make the interest rate for the end borrower lower than that of the minimum deposit rate, assuming that MoPF and MEB would take the same interest same as TSL for SME and that CHDB would continue the current tri-party agreement scheme.

On the other hand, Japanese side insisted that the interest rate should not be lower than 8% the current lowest interest rate for deposit. It was because the interest rate should be raised after the provision of ODA loan was over, if the initial interest rate was made lower than 8%. This cannot be good in terms establishing mortgage loan system in Myanmar and managing it with sustainability for a long time. The Japanese side emphasised the importance of discussion focusing on a longer term, rather than only seeing major issues at present.

Following such discussion, it was agreed to make the interest rate for the end borrower shall be slightly higher than the lowest interest rate for deposit.

In addition, responsible party for the loss which may be caused when the borrower default was clarified: CHDB shall take the risk while receiving certain interest and the residual would be kept in a separate reserve account to be prepared in MEB for use of future expansion of the scheme

## 6.2 Disbursement Plan

### 6.2.1 Definition of Batches

As explained in previous parts, to start provision of mortgage loan as early as possible was seen as an important goal to achieve, while certain qualities should be met for the target housing, which may

take some time to secure this. In order to meet this contradicting condition, it was discussed and agreed that disbursement would be made by three different batches.

The target of the 1st Batch is that DUHD housing already constructed/under construction based on the current design with certain quality, that of the 2nd Batch is DUHD housing to be built on a NEW Design with new inspection rules, and that of the 3rd Batch is housing constructed or to be constructed by Regional Government such as YCDC with the same level of quality as that of the 2nd Batch. In parallel participation of private banks as PFIs are also assumed subject to legalisation of necessary conditions.

These conditions for each batches are summarised as per Table 6-3 below.

**Table 6-3 Batch and Target Housing**

Batch	Description of Target Housing	PFI	FY
1st Batch	DUHD housing already constructed/under construction based on the current design with certain quality	CHDB	mid 2018 – 2019
<b>2nd Batch</b>	DUHD housing to be built based on a NEW Design with new inspection rules.	CHDB Private Banks	2020 -
3rd Batch	Housing constructed by Regional Governments such as YCDC	CHD Private Banks	(2020-)

\*Note: if it is confirmed that low cost housing in Nay Pyi Taw and Mandalay meet certain quality, those will be added as target of the 1st Batch.

#### 6.2.2 Allocation between batches

How to allocate fund from Japanese ODA between the 1st Batch and the 2nd Batch were of an important subject of discussion. From the viewpoint that supporting as many Myanmar people who want to buy their own house as early as possible should be prioritised, the fund should be disbursed to the extent the demand for the mortgage loan exists. From the viewpoint, however, that contributing to the improvement of target housing and encouraging participation of private banks as PFIs are also important aims of this mortgage loan, it seems necessary to save the disbursement amount at the 1st Batch and allocate more amount at the 2nd Batch. As mentioned, target housing at the 2nd Batch will be built based on a new design and inspection procedures. Thus, at this respect the 2nd Batch should be regarded as the main batch of the project. However, it will take a few years until such new design was made and based on it new housing are built.

On this discussion, another issue was also focused: i.e. shortage of revolving fund of MOC. According to DUHD, as of the end of March 2017, the balance of the revolving fund was only MMK1, 619mil. Though DUHD explained that they have a big amount to receive, it was not certain if collection of their invested fund went as they planned. Shortage of housing provision were also

concerned as a potential cause of lower demand for mortgage loan. Therefore, it is also important for housing being built to be sold when built.

Considering these things all, the allocation between the two batches were decided as 60%/40% in the end. It is expected that by providing mortgage loan, more target housing will be purchased, revolving fund collected will be re-invested, then more low-middle income people would purchase their own housing.

**Table 6-4 Balance of Revolving Fund**

2016-2017 FY (For March)			
Income/ Expense of the capital (100 billion MMK) and Remaining Amount			
(Million Kyats)			
Sr No.	Particular	Upto March	
		Income	Expense
1	<b>Capital</b>		
2	<b>Project Income</b>		
	Income from Housing projects	32,701.214	
	Income from Land projects	909.647	
	Others	399.232	
3	<b>Operation expenses</b>		
	Expense for Housing Project		62,244.883
	Expense for Land Project		208.558
	Others		3,269.591
4	<b>Loan Repayment (CHDB)</b>		
5	<b>Income/Expense (Total)</b>	34,010.093	65,723.032
6	Remaining amount for opening accounts	33,332.651	
7	Remaining amount for closed accounts		1,619.712
	<b>Total</b>	<b>67,342.744</b>	<b>67,342.744</b>

## 6.3 Candidate Housing Units and Their Quality Improvement

### 6.3.1 Candidate Housing Units for TSL Housing Loan

As regard to the candidate housing units for Batch 1 of Phase 1, the following conditions are set.

- ① DUHD is the builder, and CHDB is PFI
- ② Being Low-cost or Affordable housing units



- ③ Being completed in two to three years from now
- ④ Being designed following the relevant requirements of DUHD, and being given appropriate building permit from relevant authority
- ⑤ Being properly managed and checked during and after the construction based on relevant regulations by DUHD

In consideration of the above, possible candidate housing units for the TSL Housing Loan shall be as follows.

As for Yangon, there are 10,798 low-cost housing units, and 1,854 affordable housing units, all of which is planned to be completed by the end of FY2018. These housing units are considered to be suitable as candidates for the Housing Loan.

In Mandalay, 1,230 low-cost housing units in Mya Yee Nanda will be possible candidate for the Housing Loan. In Nay Pyi Taw, 80 low-cost housing units in Shwe Nathar Project Pilot is nearing completion, but as the sale is already in progress, they may not be candidates for the housing loan. Instead, 396 units planned for the future may be candidate units if they are to go ahead.

In Mandalay in Nay Pyi Taw, the building permit is not implemented quite as rigorously as in Yangon, and while the two cities have higher earthquake risk, the standard design used for Mandalay and Nay Pyi Taw by DUHD is not yet verified in terms of earthquake resistance. Necessary verification and remedial actions need to be done before taking them as candidates for Housing Loan, thus they may be considered for candidacy in Batch 2 or onwards.

### **6.3.2 Framework for Ensuring Quality of Housing**

This housing finance scheme can be considered important for the purposes of resolving housing shortages and encouraging housing purchases by low-to-medium-income families in urban areas of Myanmar; and as a mechanism for contributing to the improvement of housing quality, etc., in Myanmar by utilizing Japanese knowledge, technology, skills and know-how.

In particular, with regard to housing that is eligible for this housing finance scheme, it is important to ensure sufficient “quality” such that housing functionality such as the core structural framework, etc., can be maintained in a sound state and the housing can keep its asset value in the long term, for at least for the duration of term of the financing period. It will be important to ensure safety with regard to earthquake resistance in order to ensure that destruction or major damage to the structural framework of the housing itself do not occur as a result of major earthquakes and other such disasters.

From the perspective outlined above, in determining which housing properties will be eligible for the housing finance scheme, it can be considered appropriate to establish a housing quality standard with regard to aspects such as earthquake resistance, hygiene, resource-saving, the residential environment, durability and management, and to make only housing that clears the criteria of this standard eligible for financing.

The price of housing that conforms to these housing quality standard criteria can be expected to rise in comparison with current low cost housing as a result of increases in total construction costs, due to increases in the volumes of materials used (steel rebar and concrete, etc.) and additional and/or upgraded fittings (doors and windows, etc.) and building materials. However, by providing long-term low interest housing loans (i.e. mortgages) to cover these cost increases, we can respond to this issue by making it such that the amounts of monthly repayments for homeowners who make use of these loans do not change (or are reduced); so there will be no real apparent increase in the financial burden placed on buyers.

With regard to the housing quality standard itself, we envisage that DUHD will act as the secretariat within the Steering Committee (“S/C”), and a quality control Technical Sub Committee will be established (with members from MOC, DUHD, YCDC and other local government agencies, and experts from Japan participating). The Technical Sub Committee will discuss and formulate a draft proposal, which will then be approved by the S/C, and the details of the standard will then go on to be finalized from there.

With regard to mechanisms for improving the quality of housing that is eligible for financing, it will be important not to simply raise the design standards for the housing itself, but to ensure that the actual construction of the housing itself is carried out appropriately. It will therefore be necessary to create a worksite inspection manual and checklist for housing that is eligible for financing, from the specialized perspective of ensuring the quality of low cost housing and affordable housing. We envisage a mechanism running parallel to the establishment of the standard whereby, as with the standard itself, the Technical Sub Committee will consider and prepare a draft proposal for the manual (based on an inspection manual created by MOC and DUHD) which will then be approved by the S/C.

After the establishment of the standard, manual and checklist described above, the quality assurance Technical Sub Committee will be given the function of screening the designs for finance-eligible housing, ensuring their conformity with the quality standard, and verifying that inspections of those properties (including checks by third-party organizations) are being carried out appropriately.

Regarding the schedule for this, we will aim for the quality standard, on-site inspection manual and checklist for finance-eligible housing to be formulated by the quality control Technical Sub Committee within around one year after the pledge. As a tentative measure for the 1st Batch of finance-eligible properties to be financed during that period, it would be desirable to qualify housing properties as being eligible for financing based on receipt of a document issued by DUHD (i.e. the main body in charge of the construction) stating that the low cost housing and affordable housing currently under construction by DUHD has been granted construction permits, that the MOC construction inspection manual has been applied to it, and that said housing is therefore suitable for citizens of Myanmar to live in.

Envisaged roles of the various organizations with regard to ensuring quality of housing:

- S/C
  - Approves housing quality standard, inspection manual and checklist
  - Accepts “check-completed” certificates issued by Technical Sub Committee and submits them to PFIs
- Quality control Technical Sub Committee
  - DUHD acts as secretariat; MOC, DUHD, YCDC and other local government experts, architectural engineers from Myanmar (certified by MEC, etc.,) and experts from Japan participate as members
  - Discusses and prepares the housing quality standard, inspection manual and checklist for finance-eligible housing (within around one year of commencing financing)
  - Verifies that design and property inspections for finance-eligible housing are being carried out appropriately (after formulation of the quality standard, manual and checklist)

(Design screening items)

(1) Checks construction permits issued by YCDC, etc.

(2) Checks results of conformity checks with the housing quality standard carried out by third-party institutions

(Property inspection items)

(1) Checks construction completion certificates issued by YCDC, etc.

(2) Checks results of interim inspections and completion inspections carried out by third-party institutions based on the inspection manual and checklist

- Issues “check-completed” certificates and submits them to the S/C
- Third-party inspection organizations
  - MEC-certified Senior Engineer qualification holders (or architectural engineers working under the supervision of such a qualification holder) carry out checks for conformity with the housing quality standard and design content.
  - MEC-certified Senior Engineer qualification holders (or architectural engineers working under the supervision of such a qualification holder) carry out interim inspections and completion inspections of properties based on the inspection manual and checklist
  - Report check results and interim & completion inspection findings to the client
  - We envisage the cost of checks and inspections being covered by the client.
  - In the future, we envisage other organizations established by local government, MCEA and

MES, etc. on a state and/or regional basis also being recognized as such inspection institutions.

- DUHD

- Establishes a “new standard design” that conforms with the quality standard for finance-eligible housing
- Supervises the construction of finance-eligible housing based on the manual and checklist
- Issues documents stating that the low cost housing and affordable housing currently under construction by DUHD has been granted construction permits, that the MOC construction inspection manual has been applied to it, and that said housing is therefore suitable for citizens of Myanmar to live in (in relation to the 1st Batch of properties to be financed, before the establishment of the system outlined above)

### 6.3.3 Conditions for Loan Target Housings

#### (1) Design Conditions

Technical standards that are advised to be considered during the design stage of the loan target housings are given below. It is assumed that reference will be made to the following technical standards when standard design is carried out within the DUHD in the future.

① Required Items

- Earthquake resistance standard (earthquake resistant structure considering seismic force)
- Sanitation standard (installation of flush toilet, water supply system, sewer system /septic tank)
- Residential environment standard (installation of power receiving system (or power generation system))
- Security standard (installation of entrance door locks, window internal locks)
- Fire prevention standard (installation of fire prevention equipment such as fire extinguisher, fire hydrant, hose)
- Structural durability standard (application of roofing materials)
- Building maintenance standard (construction of proper building maintenance system)

② Recommended Items

- Sanitation standard (installation of window screens)
- Energy conservation standard (installation of water saving toilet, energy efficient lighting, heat reflecting glass (window films), heat insulation / air-tightness, energy recycling system)

- |   |
|---|
| - Structural durability standard (paint durable against weathering) |
|---|

## (2) Conditions on Design and Construction Check

In order to ensure “quality” of loan target housing, it is necessary to securely check whether the above design condition are being met and the construction work is implemented in a proper manner.

Conditions related to checks during the design and construction stages are as follows:

Conditions related to checks during the design stage

Implementation of inspections related to building design and structure, conducted by senior engineer(s) accredited by MEC belonging to a government agency or a third party organization (receipt of inspection certificates of design / structure)

Procedures on building permits performed by local governments (receipt of building permit)

Conditions related to checks during the construction stage

Implementation of mid-term and final inspections conducted by senior engineer(s) accredited by MEC belonging to a government agency or a third party organization

Procedures on building completion performed by local governments (receipt of building completion certificate)

## 6.4 Other Matter to be Considered

### 6.4.1 Clause of Prohibition of Lease and Resale

In implementing this TSL loan by ODA, one of its objectives is to provide stable housing for low-income population, so that it must be avoided that the housing loan funded from this TSL loan is used for rental revenue by housing lease or for resale speculative purposes which main purpose is to collect profits by housing resale. For this reason, for a mortgage with this TSL loan as a resource, a contract scheme is required to prohibit buyers from leasing or reselling for a certain period during and after repaying the loan. In the current CHDB tri party agreement scheme, leasing and reselling are prohibited until the loan is fully paid (tri party agreement, 2 (c), 4 (k)). In an ownership book, resale is prohibited for 5 years from the start of the loan, though there is no provision for leasing. Therefore, with respect to the current CHDB housing loan, if it takes more than five years to repay the loan, resale and rent is prohibited during the loan period. Also, even if the loan is repaid within 5 years, resale is prohibited for 5 years from the start of the loan. Since there is no prohibition clause for lease in an ownership book, if a borrower pays off the loan, he/she can immediately lease it. Therefore, a clause which prohibits leasing for at least five years should be included in an ownership book. In addition, since it is merely obliged to live for 5 years at present, it is desirable to further extend that period. The

5 year ban on resale applies only to low cost housing, not to affordable housing. Therefore, if affordable housing is included in the subject of mortgage loan by this TSL loan, the resale prohibition clause should be applied to affordable housing in the same way.

With respect to housing loans by private banks, it is mainstream that a loan agreement is concluded between private banks and borrowers. For mortgage loans based on this TSL loan, prohibition clause of leasing and resale during loan period and several years after full loan repayment should be included in such loan agreement.

## **Chapter 7 ENVIRONMENTAL AND SOCIAL CONSIDERATION**

### **7.1 Myanmar's legislation and institutional frameworks for environmental and social consideration**

#### **7.1.1 Legislation and standards for environmental and social consideration**

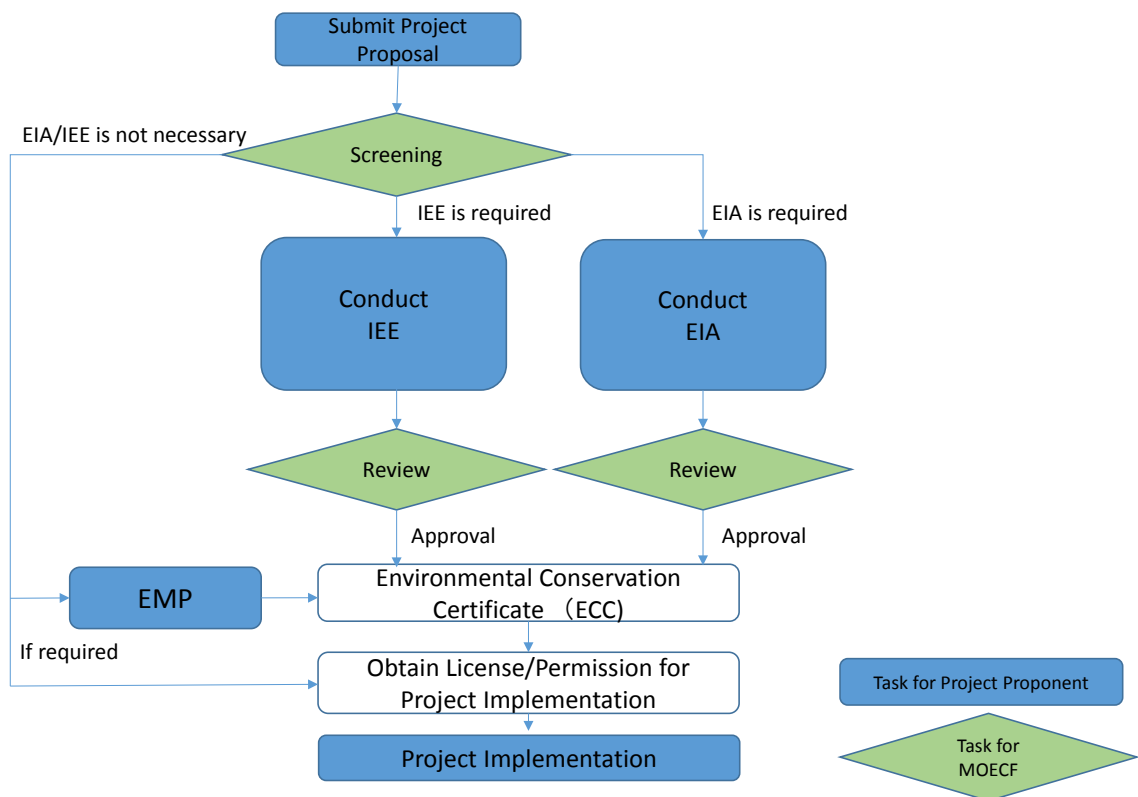
Environmental Conservation Law, 2012 was issued on March 30, 2012 as the law related to environmental and social considerations. The law stipulates the basic policy including the duty and powers of Ministry of Environmental Conservation and Forestry (MOECF), establishment of Environmental Quality Standards, measures related to the environmental emergency. Following the law, Environmental Conservation Rules, 2014 which stipulates the implementation of environmental impact assessment was issued in June 5, 2013, and Environmental Impact Assessment Procedure, 2016 (EIAP) which indicates the detail implementation procedure was approved in Dec, 2015. National Environmental Quality (Emission) guidelines, which shows the environmental quality standard of Myanmar was also approved in Dec 2015.

EIAP shows the criteria to categorize the project into four types depending on the required assessment: ①Environmental Impact Assessment (EIA), ②Initial Environmental Examination (IEE), ③Environmental Management Plan (EMP), or ④No assessment. Criteria are shown for following nine sectors and 141 types of economic activities based on the type and the size of the projects.

- |  |  |
|--|--|
| 1. Special Investment Projects in which investment is decided by the Parliament or the government cabinet or the President | 5. Waste Management                        |
| 2. Energy Sector Development   | 6. Water Supply                            |
| 3. Agriculture, Livestock and Forestry Development   | 7. Infrastructure and Services Development |
| 4. Manufacturing   | 8. Transportation                          |
| —Food and Beverage Manufacturing   | 9. Mining                                  |
| —Garments, Textiles and Leather Products   |  |

- Wood Manufacturing
- Chemicals Manufacturing
- Manufacture of Glass and Ceramics
- Manufacture of Construction Materials
- Metal, Machinery and Electronics

The project proponent is required to conduct EIA/IEE/EMP, if it is necessary based on the result of screening, and obtain Environmental Compliance Certificate (ECC) from MOECF following the process shown in Figure 7-1.



Source: Prepared by study team based on EIAP

**Figure 7-1 Process to obtain ECC**

In order to complement EIAP, the guidelines, “Administrative Instruction of EIA Procedure”, and “Consultant Registration Scheme” which provides registration standard and procedure of EIA consultants, are under preparation with support from JICA. In addition, “Guideline on Public Participation of Myanmar’s EIA Processes” is also under preparation with support from United States Agency for International Development (USAID).



### **7.1.2 Role of the relevant organizations**

MOECF was established by reforming the Ministry of Forestry in order to strengthen the administrative management for environmental sector in September 2011. Environmental Conservation Department (ECD) was formed to carry out the functions for implementation of policy related to environmental management, conservation, and enhancement of environment. ECD consists of four divisions: ①Administration, ②Policy Planning & Training, ③Pollution Control, and ④Environmental Resource Conservation & EIA assessment. Environmental Resource Conservation & EIA assessment Division is the one to carry out the EIA review process.

Because ECD is still new organization, its resource and experience are not considered enough. Therefore, JICA is implementing the capacity building project for ECD to strengthen the skills to carry out EIA<sup>53</sup>. Based on the interview to ECD, ECD has branch offices in 14 regions and states, and about 400 employees, as of May 2017. ECD is planning to expand its branch offices to whole countries, and the number of employees to 600. ECD currently is working on the establishment of review procedure, guidelines of EIA, and building awareness of EIA among domestic and international project proponents.

## **7.2 Environmental and Social Consideration for the Project**

### **7.2.1 Sub-projects of the Project**

JICA TSL scheme currently under consideration will provide housing loan to buyers of houses through CHDB and it was decided that the housing construction by DUHD and private developers would not be sub-projects. Therefore, there is no significant environment and social impact expected by the Project.

On the other hand, because CHDB's housing loan is provided to buyers of houses supplied by DUHD, potential environment and social impact by the DUHD's housing construction project, the measures and capacity of the executing agency and relevant organizations to mitigate the risk regarding environment and social considerations are summarized below for reference although the construction is not in the scope of this project.

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53 JICA website <https://www.jica.go.jp/myanmar/office/information/press/141223.html>

## 7.2.2 Environmental and social considerations regarding housing construction project

### (1) Screening criteria based on EIAP

There is no screening criteria set for housing construction projects in EIAP. According to the interview with ECD, ECD expects the project proponents to submit the project plan to ECD depending on the size of the project area by reference to criteria set for Tourism and Hospitality Development (Table 7-1) although housing development projects are not listed in EIAP.

**Table 7-1 Screening Criteria for Tourism and Hospitality Development under Infrastructure and Service Development**

Type of Economic Activity	Criteria for IEE Type Economic Activities	Criteria for EIA Type Economic Activities
Infrastructure and Service Development		
Tourism and Hospitality Development	$\geq 80$ rooms but $< 200$ rooms or total utilization area $\geq 200,000\text{m}^2$ but $< 500,000\text{m}^2$	$\geq 200$ rooms or total utilization area $\geq 500,000\text{m}^2$

Source: EIAP

As long as referring to criteria in Table 7-1, the target houses including Low Cost and Affordable houses listed in Chapter 3 (Table 3-2~3-5) are not categorized as EIA type projects. However, some housing development projects, Kyan Sit Min (1) (52acre=20.8ha, 80% completion), and Kyan Sit Min Low Cost Ph. 1(52acre=20.8ha, under construction) located in Hlaing Tharyar Township, exceed the area size determined by screening criteria, and therefore there is possibility to be categorized as IEE type projects.

In addition to the building construction, DUHD's housing supply program involves groundwater development by MOC since most of all project sites do not have water supply system. Regarding the groundwater development, EIAP sets the screening criteria as shown in Table 7-2. According to DUHD, the estimated daily consumption 300L/day/household is used for the planning groundwater development, which means 4,500 m<sup>3</sup> water is considered as the consumption by 15,000 households. Based on this assumption, the projects currently planned by DUHD are not classified as EIA type projects in terms of water supply activity. However, it is expected to clarify with ECD about the criteria for IEE type project since lower limit of water volume is not defined in EIAP.

**Table 7-2 Screening Criteria for Water Supply**

Type of Economic Activity	Criteria for IEE Type Economic Activities	Criteria for EIA Type Economic Activities
Water Supply		
Groundwater Development for Industrial, Agricultural or Urban Water Supply	<4,500m <sup>3</sup>	≥4,500m <sup>3</sup>

Source: EIAP

As mentioned above, criteria for the housing development is not clearly identified in EIAP, therefore it is expected to clarify the screening criteria for housing construction with ECD based on the project plan especially for the project which will be planned in future.

(2) Screening based on JICA guideline

JICA guideline shows the illustrative list of projects which are likely to be categorized as “Category A” as in Table 7-3. Even if the projects are not included in the projects shown in Table 7-3, the projects that are likely to have a significant adverse impact on the environment and society are categorized as “Category A”.

**Table 7-3 The illustrative list of projects categorized as “Category A” based on JICA guideline**

<p>1. Sensitive Sectors</p> <p>Large-scale projects in the following sectors</p> <p>(1) Mining, including oil and natural gas development</p> <p>(2) Oil and gas pipelines</p> <p>(3) Industrial development</p> <p>(4) Thermal power, including geothermal power</p> <p>(5) Hydropower, dams, and reservoirs</p> <p>(6) Power transmission and distribution lines involving large-scale involuntary resettlement, large-scale logging, or submarine electrical cables</p> <p>(7) River/erosion control</p> <p>(8) Roads, railways, and bridges</p> <p>(9) Airports</p> <p>(10) Ports and harbors</p> <p>(11) Water supply, sewage, and wastewater treatment that have sensitive characteristics or that are located in sensitive areas or in their vicinity</p> <p>(12) Waste management and disposal</p>
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(13) Agriculture involving large-scale land clearing or irrigation

2. Sensitive Characteristics

- (1) Large-scale involuntary resettlement
- (2) Large-scale groundwater pumping
- (3) Large-scale land reclamation, land development, and land clearing
- (4) Large-scale logging

3. Sensitive Areas

Projects in the following areas or their vicinity

- (1) National parks, nationally-designated protected areas (coastal areas, wetlands, areas for ethnic minorities or indigenous peoples and cultural heritage, etc. designated by national governments)
- (2) Areas that are thought to require careful consideration by the country or locality
  - 〈Natural Environment〉
    - 1) Primary forests or natural forests in tropical areas
    - 2) Habitats with important ecological value (coral reefs, mangrove wetlands, tidal flats, etc.)
    - 3) Habitats of rare species that require protection under domestic legislation, international treaties, etc.
    - 4) Areas in danger of large-scale salt accumulation or soil erosion
    - 5) Areas with a remarkable tendency towards desertification
  - 〈Social Environment〉
    - 1) Areas with unique archeological, historical, or cultural value
    - 2) Areas inhabited by ethnic minorities, indigenous peoples, or nomadic peoples with traditional ways of life, and other areas with special social value

Source: JICA guideline

Based on the interview with DUHD, the target houses including Low Cost and Affordable houses listed in Chapter 3 (Table 3-2~3-5) are not categorized as “Category A”.

### **7.3 Institutional capacity of environmental and social consideration of executing agency**

Current status of institutional capacity and internal procedures for environmental and social considerations of CHDB and DUHD which is responsible for housing construction are summarized in the following section.

### **7.3.1 Confirmation of institutional capacity of environmental and social consideration of executing agencies**

#### **(1) CHDB**

Currently, CHDB does not have any guideline, procedure, and organization related to environmental and social considerations. In addition, the awareness about the necessity of environmental and social consideration is still low in CHDB. Considering the situation that the issuance of Environmental Conservation Law, and EIAP were resented in 2012 and end 2015 respectively, and ECD has just started educational activities about environmental and social considerations to domestic and international project proponents as mentioned above, the current status of CHDB is understandable.

#### **(2) DUHD**

According to DUHD, there is no guideline, procedure, and organization related to environmental and social consideration in DUHD. “Urban and Regional Development Planning Law”, and “Housing Law” which are under preparation by MOC will stipulate about EIA and Social Impact Assessment (SIA) for the first time. The institutional procedure, guideline, and organization will be prepared after the issuance of these laws of MOC.

### **7.3.2 Criteria and procedure to select sub-projects in regard to environmental and social consideration**

#### **(1) CHDB**

The project is not provided for housing construction projects. Also, environmental and social consideration of housing development projects are the responsibility of DUHD, in principle. However, CHDB, as a financial intermediary providing loan to DUHD’s housing construction project, is expected to have procedure and capacity to examine the project proponents to see whether appropriate environmental and social considerations are ensured for the housing construction projects to avoid and minimize for potential negative impacts on environment and local society. Below shows that the criteria and selection procedure considering environment and social impact which is expected to be considered for reference when CHDB is providing loan to DUHD’s housing construction project although it’s not scope of TSL.

- Stipulating the implementation of environmental and social consideration in operation guideline of loan.
- Assigning the unit, or person responsible for environmental and social consideration.
- Preparation of selection criteria and checklist for the projects to be provided loan.

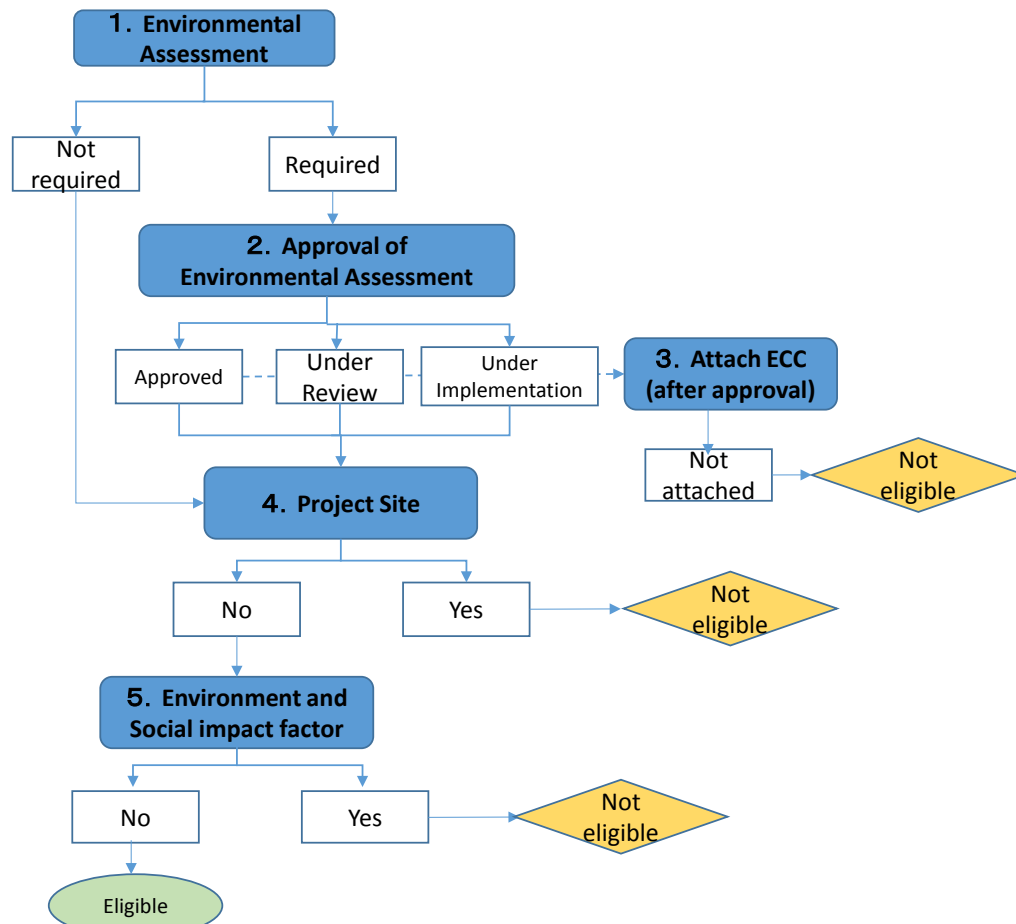
Below shows the example check list (Table 7-4) and selecting process (Figure 7-2) in order to eliminate the projects incompliance with Myanmar's law related to environmental and social consideration through negative screening.

**Table 7-4 Check list (example)**

<p>1. Is environmental assessment (EIA, IEE) required for the project according to the EIAP?</p> <p><input type="checkbox"/>Necessary (<input type="checkbox"/>Implemented <input type="checkbox"/>Ongoing/planning)</p> <p><input type="checkbox"/>Not necessary</p> <p><input type="checkbox"/>Other ( )</p> <p>2. If that environmental assessment is required, was the relevant environmental assessment (EIA/IEE, etc.) reviewed and approved?</p> <p><input type="checkbox"/>Approved</p> <p><input type="checkbox"/>Under review</p> <p><input type="checkbox"/>Under implementation</p> <p><input type="checkbox"/>Other ( )</p> <p>3. If the environmental assessment (EIA/IEE, etc.) is required, please attach ECC after approval.</p> <p><input type="checkbox"/>Attached <input type="checkbox"/>Not attached</p> <p>4. Does the project site include following areas?</p> <p><input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>(1) National parks, nationally-designated protected areas (coastal areas, wetlands, areas for ethnic minorities or indigenous peoples and cultural heritage, etc. designated by national governments)</p> <p>(2) Primary forests or natural forests in tropical areas</p> <p>(3) Habitats with important ecological value (coral reefs, mangrove wetlands, tidal flats, etc.)</p> <p>(4) Habitats of rare species that require protection under domestic legislation, international treaties, etc.</p> <p>(5) Areas in danger of large-scale salt accumulation or soil erosion</p> <p>(6) Areas with a remarkable tendency towards desertification</p> <p>(7) Areas with unique archeological, historical, or cultural value</p> <p>(8) Areas inhabited by ethnic minorities, indigenous peoples, or nomadic peoples with traditional ways of life, and other areas with special social value</p> <p>5. Does the project expect following factors?</p> <p><input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>(1) Large-scale involuntary resettlement</p>
---

- (2) Large-scale groundwater pumping
- (3) Large-scale land reclamation, land development, and land clearing
- (4) Large-scale logging

Source: Prepared by study team based on JICA guideline



**Figure 7-2 Flow for selecting eligible projects based on the checklist (example)**

## (2) DUHD

As mentioned above, MOC is currently preparing the law and guidelines in the ministry. Following the preparation of law, procedures and organizations to ensure the compliance to Myanmar's environment and conservation law are expected to be prepared. Below would be necessary to be prepared at minimum to ensure the environment and social consideration:

- Assigning the unit or person responsible for environmental and social consideration.
- Assigning the unit or person responsible for monitoring in accordance with EIAP
- Clarification of criteria required to conduct EIA/IEE
- EIAP does not clearly state the criteria about EIA/IEE type projects for housing construction.

As mentioned above, it would be necessary to confirm with ECD if the implementation of environmental assessment (EIA/IEE, etc.) is required for the housing construction projects. If necessary, it is also necessary to clarify the criteria for EIA/IEE type of projects.

Below is the example checklist for the assessment of environment and social impact for target housing construction projects for reference.

**Table 7-5 Check list (example)**

Category	Item	Check items	Yes: Y No: N	Concrete environmental and social considerations (Reason for Yes/No, mitigation measures, etc.)
1 Permits and approvals, explanations	(1) EIA and environmental permits	(a) Has EIA or other required documents been prepared? (b) Has EIA or other required documents been approved by the government? (c) Does the approval of EIA or other required documents include condition? If so, is the condition satisfied? (d) If it's required, was any other permission from the relevant organizations related to environment obtained?	(a) (b) (c) (d)	(a) (b) (c) (d)
	(2) Explanations to the public	(a) Was the project information explained to the local stakeholders? (b) Was the comment from local residents, etc. reflected to the project plan?	(a) (b)	(a) (b)
	(3) Consideration of alternative plan	(a) Are multiple alternative options for the project plan planned (including environment and social items when they are considered) ?	(a)	(a)
2 Anti-pollution	(1) Air quality	(a) Does the emission from air pollutions (SO <sub>x</sub> , NO <sub>x</sub> , PM) meet the countries emission standard? Will any mitigation action be taken? (b) Does the electric/heat source of the	(a) (b)	(a) (b)



		accommodation facility, etc. adopt fuel with lower emission factor (CO2, NOx, Sox etc.)?		
	(2) Water quality	(a) Will the wastewater from the facility meet the country's emission, environment standards?	(a)	(a)
	(3) Waste	(a) Will the waste from the facility promptly treated according to the country's regulation.	(a)	(a)
	(4) Soil contamination	(a) Will the mitigation action be taken to avoid soil and ground water contamination by the wastewater from the facility?	(a)	(a)
	(5) Noise and vibration	(a) Will the noise and vibration level satisfy the country's standard?	(a)	(a)
	(6) Subsidence	(a) In case a large amount of ground water is pumped, is there any possibility of occurrence of subsidence?	(a)	(a)
	(7) Odor	(a) Is there any source of odor? Will the mitigation action be taken to avoid odor?	(a)	(a)
3 Natural Environment	(1) Protected Areas	(a) Is the project site located in the protected area, or will the project activity affect the protected area?	(a)	(a)
	(2) Ecosystem	(a) Does the project site include natural forest, tropical forest, or important habitat in terms of ecosystem (coral, manglobe, wetland, etc.)? (b) Doe the project site include habitat of rare species required to be protected by the country's law, international ordinance, etc.? (c) If any significant impact on the ecosystem is expected, will the mitigation action be taken? (d) Will the water (ground and surface) withdrawal by the project impact on the water environment of river etc.? Will the any mitigation action to avoid impact of water animals be taken?	(a) (b) (c) (d)	(a) (b) (c) (d)
	(3) Hydrology	(a) Will the project affect ground water and surface water hydrology?	(a)	(a)
	(4) Topography and geology	(a) Will the project affect the change of topography and geology significantly?	(a)	(a)

4 Social environment	(1) Resettlement	<p>(a) Will any involuntary resettlement be expected due to the project activity? If so, is there any mitigation action taken to minimize the impact?</p> <p>(b) Will proper explanation be conducted to the affected residences about compensation and lives back plan before resettlement? (c) Was the survey for resettlement conducted, and the resettlement plan including compensation by the land re-acquisition cost, lives back after resettlement made? (d) Will the payment of compensation be completed before resettlement? (e) Was the compensation plan prepared in written document? (f) Is the plan well considering especially socially vulnerable people, such as women, children, old people, poor, ethnic minority, indigenous, community? (g) Will the agreement with resettled community be made before resettlement? (h) Will the structure to implement resettlement properly be organized? Will the enough capacity and budget be prepared? (i) Will the monitoring of the impact by the resettlement be planned? (j) Will the grievance adjustment system be established?</p>	<p>(a)</p> <p>(b)</p> <p>(c)</p> <p>(d)</p> <p>(e)</p> <p>(f)</p> <p>(g)</p> <p>(h)</p> <p>(i)</p> <p>(j)</p>	<p>(a)</p> <p>(b)</p> <p>(c)</p> <p>(d)</p> <p>(e)</p> <p>(f)</p> <p>(g)</p> <p>(h)</p> <p>(i)</p> <p>(j)</p>
	(2) Living and livelihood	(a) Will the any mitigation action be planned if the negative impact on the living of residences is expected?	(a)	(a)
	(3) Heritage	(a) Is there any negative impact on cultural, historical, religious heritage expected? Is there any special measures based on the country's regulation be considered?	(a)	(a)
	(4) Landscape	<p>(a) If there is any special landscape to be considered, is there any negative impact on it expected? If so, is any mitigation action to be taken?</p> <p>(b) Is there any possibility to damage landscape by construction of large-scale building?</p>	<p>(a)</p> <p>(b)</p>	<p>(a)</p> <p>(b)</p>

	(5) Ethnic minorities and indigenous people	(a) Was the mitigation of impact on ethnic minorities and indigenous people considered? (b) Were the right on land and resources of ethnic minorities and indigenous people respected?	(a) (b)	(a) (b)
	(6) Working conditions (including occupational safety)	(a) Is the relevant law on working condition complied? (b) Was the compensation plan prepared in written document? (c) Is safety and health plan and safety education planned? (d) Will the proper measures to avoid negative impact on project proponent and local residences' safety by the security person be planned?	(a) (b) (c) (d)	(a) (b) (c) (d)
5 Other	(1) Impact during construction	(a) Mitigation of pollution (noise, vibration, wastewater, emission as, waste, etc.) during construction is taken. (b) Is negative impact on natural environment, ecosystem expected by the construction? Is there any mitigation action planned? (c) Is any negative impact on social environment by the construction expected? Is there any mitigation action planned? (d) Is traffic jam expected by the construction? Is there any mitigation action planned?	(a) (b) (c)	(a) (b) (c)
	(2) Monitoring	(a) For the items expected negative impact, is there monitoring planned or will the monitoring be implemented? (b) How the items, method, frequency of monitoring were decided? (c) Was the monitoring structure (organization, staff, equipment, and cost and sustainability) established? (d) Were the reporting method, and frequency by the project proponent to the relevant ministries decided?	(a) (b) (c) (d)	(a) (b) (c) (d)

6 Note	Reference of other environmental check list	(a) If necessary, the relevant check items in the checklist for road, railway, and bridge should be added for the evaluation (for instance, in the case access road is developed related to infrastructure development). (b) For laying telephone cables, tower, undersea cable, the relevant check items in the checklist for transmission, transformation, and distribution of electricity should be added for the evaluation.	(a) (b)	(a) (b)
	Note for usage of environmental check list	(a) If necessary, the impact on the beyond border or global environmental issues are confirmed. (if the factors related to issues such as management of waste beyond border, acid rain, destruction of the ozone layer, global warming are expected)	(a)	(a)

Note 1) In case, “country standard” is significantly different from internationally recognized standards, the relevant measures should be considered. For the items for which the regulation is not established, the consideration should be carried out by comparison with adequate standards of other countries (including experience in Japan).

Note 2) This environmental check list shows the standard check items. Items should be deleted or added depending on the characteristics of project and region.

Source: JICA guidelines

## **Chapter 8      PROPOSAL FOR FURTHER DEVELOPMENT**

### **8.1 Improving the Quality of Target Housing**

#### **8.1.1 Handling for the 1st Batch Onwards**

Through this study, as for the low cost housing and affordable housing built by DUHD in the Yangon region (or Yangon Division) of Myanmar, it was confirmed that basically the necessary documents are submitted, checks pertaining to architectural permits (at the time of design) and construction completion (at the time of the completion) are conducted, and construction permit and completion certificates are received; all in accordance with the workflow for construction permits and completion stipulated by the YCDC Building Department. This means that the design and actual construction of all housing is subjected to certain double checks by a public body at each stage of the construction process.

With regard to the 1st Batch, as a transitional measure with the aim of providing loans as quickly as possible, loan provision shall be made to those, having fulfilled the financing conditions for the TS Mortgage Loan, who purchase such housing of which quality is certified by a document from DUHD. We envisage that the proper procedure for determining target housing will be carried out from the 2nd Batch onwards. In implementing this initiative, not only consultants offering support and cooperation to the Technical Sub Committee in the discussion and creation of the quality standard and the formulation of the inspection manual and checklist as mentioned earlier, but also shall it be required they work together with DUHD to form a new standard design that conforms to the quality standard above-mentioned.

In the future, further detailed surveys with regard to properties that are currently not included as target of the TS Mortgage Loan. Such survey will include investigating whether or not housing being built by YRG is of the same level as those built by DUHD, and ascertaining the state of housing being built by private developers in order to assess the possibility of expanding the TS Mortgage Loan scheme to those housing in the 3rd Batch, or as a second phase.

Moreover, in order to improve the quality and performance of housing in Myanmar further, in addition to the creation and operation of the standards, manuals and checklists that we have outlined so far, it will be also essential to improve the knowledge, experience, technical capabilities, awareness

and morals, etc., of all persons involved in the construction of housing, etc., in the country. Therefore, it is desirable for JICA to give separate support and cooperation with regard to such initiatives in parallel to this housing finance initiative.

	Target housing	Financing conditions	Notes
1st Batch	DUHD housing already constructed/under construction based on the current design with certain quality	Quality certification document must be issued by DUHD	DUHD housing built in other than Yangon might be target provided that the same level of quality is confirmed
2nd Batch	DUHD housing to be built based on a NEW Design with new inspection rules.	<p>Certificates of construction permission and completion must be issued by YCDC, etc.</p> <p>Housing must conform to quality standards (subcommittee checks)</p> <p>Inspections must be carried out in accordance with manual and checklist (as above)</p>	<p>Specific content of quality standard, manual and checklist to need to be considered</p> <p>New standard design need to be considered and established</p>
3rd Batch	Housing constructed by Regional Governments such as YCDC	The same content is required as the 2nd Batch.	Situational surveys, checks and surveys of legal systems, etc., needs to be conducted

#### 8.1.2 Driving the Project Forward and Improving the Quality of Housing Eligible for Financing

From the perspective of driving the Project forward and assisting improvement in the quality and performance of housing in Myanmar in general, it is also important to refer to past experiences in Japan to promote consideration of schemes and formation of organizations in relation to the design and construction of target (i.e. financing-eligible) housing as well as the supply, maintenance and management of housing in tandem with the advancement of the Project.

Specifically, this will require supporting initiatives in the Technical Sub Committee; cooperating with DUHD in creating a new standard design while at the same time preparing the quality criteria and various inspection manuals and checklists for implementation of the Project; and seeking to enhance technological aspects and human resources development, etc., in relation to design and construction. Additionally, as a means of supplying large volumes of low cost housing, at the same time as referring to past experiences in Japan to propose the formation of organizations and strategies for the use of

publicly-owned land for supplying housing, it will also be desirable to advance the transfer of technology—such as by holding seminars and workshops—with regard to matters that may be considered advisable for DUHD to work towards in the future, such as common modularization and standardization of house components and performance labelling towards improving housing quality and performance.

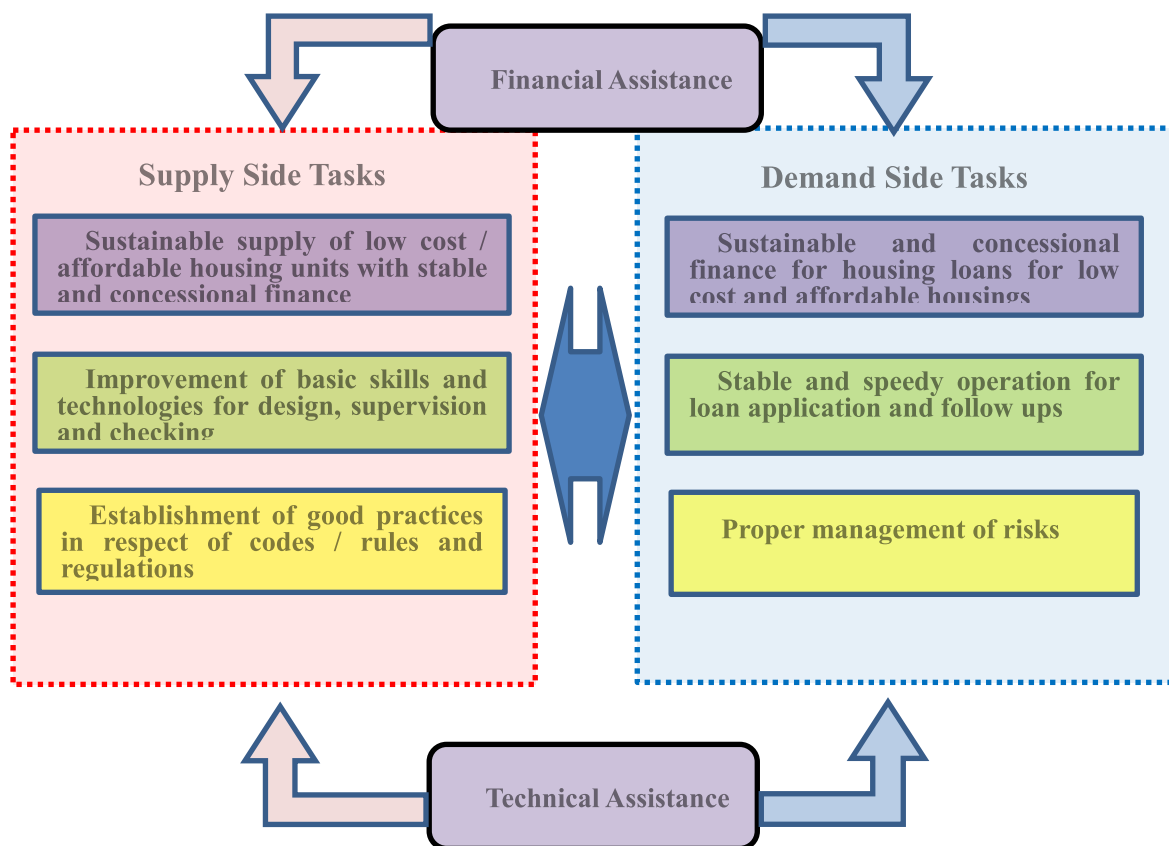
### **8.1.3           Balanced Assistance over the Demand and Supply Sides**

Another point to be considered for further development of the Project is concern for the shortage of target housing. As referred in 3.1.1, while DUHD has a plan to provide as much as 200,000 units of low cost and affordable housing in the period between 2010 - 2030, DUHD is already facing a shortage of fund to provide those housing. In order to maximize the effect of development of mortgage loan, reinforcement of supply side will be also crucial so that shortage of supply of target housing would not happen.

For this reason, in addition to support for the Demand Side, additional assistance for the Supply Side should be also considered in order to achieve balance between demand and supply. This will contribute to stabilizing the otherwise insufficient funding flow for low cost and affordable housing, and thus improving the sustainability of the public housing supply.

In the Post-War Japan, in comparison, the Supply Side was mainly serviced by Japan Housing Corporation, whose main task was to supply collective housing units for the working population in need of housings. On the Demand Side, the Government Housing Loan Corporation was established so that the people would be able to acquire decent housing units in pursuit of healthy and civilized livelihood. Both entities borrowed from the Fiscal Investment and Loan Program (FLIP) established by the Japan's Ministry of Finance. Thus the government in the Post-War Japan assisted both the Demand and Supply sides Supply Sides. This experience of Japan could be a clue to the case of Myanmar today..

It could be worth alternatively considering new approaches which is suitable for a particular context in Myanmar today, especially in Yangon. One of such approaches is a chain development assuming a good cooperation between Public and Private. The detail of this approach was studied in a JICA project in 2015-2016.



**Figure 8-1 Balanced Assistance over the Supply and Demand**

## 8.2 Necessity to Improve Legal System

### 8.2.1 Establishment of Unit Ownership

In order to make housing loan more effective for housing to be built by private developers in particular, it is necessary to establish system of unit ownership. As a clue for improvement, the Condominium Law was enacted on January 22, 2016, and buildings of the sixth floor or higher constructed in accordance with the same law on a shared registered land subject to the same law, a room of the building was admitted to be a subject of independent ownership and transaction.

As a result, purchasers of condominium units that are subject to the Condominium Law can acquire (shared) land ownership at the same time according to proportion of units, and in addition to sales contracts it is also essential to register a unit and a land. In such sale, buyers can possess ownership of a housing unit, legal stability is more enhanced, and the unit sale is suitable as a subject for a mortgage loan. However, it is said to take 3 to 4 months to finish enactment of detailed rules of the Condominium Law, and it is expected that full-scale enforcement still takes time. In addition, the range of properties to which the Condominium Law is applied is restricted to 6 stories or more. Since the Condominium



Law mainly covers properties for high-income people, in order to implement housing loan for sales of low-cost housing, it is necessary to further improve the law to recognize unit ownership of low-cost housing.

According to the latest information, enactment of “Apartment, Housing and Building Law” is under consideration cheaper apartment housing and introduce a system of unit ownership in order for buyers of housing units to receive mortgage loan. If such system can be enacted, it can be said that low cost housing units constructed by private developers can also be included in the target of mortgage loan for low cost housing provided by TSL scheme.

### **8.2.2 Development of Mortgage Registration System and Procedures for Mortgage Enforcement**

In order to make a housing loan scheme more effective, first of all, it is important to establish a registration system for buildings through legal development. In the present situation, although there is a registration system in MOALI and YCDC for land deal, the housing unit deal is a deal of the right to use space, and it is not admitted to be registered at MOALI or YCDC. In order to secure interest of collateral pledged on the unit and to execute the collateral at the time of default, it is indispensable to establish a system which ensures to register the unit which becomes subject of collateral and to make it possible for third parties to investigate who the right holders are.

Secondly it is necessary to design a system that can facilitate more smooth and short time process for mortgage enforcement. For this purpose, improvement of legal system for mortgage enforcement. First of all, it is necessary to promote the registration of sales of immovable properties, so that real estate registration matches the actual situation. And if unit ownership is approved, it is also necessary to make registration accurate for sale of housing units. In addition, it is necessary to make it possible to register mortgage setting and legally determine its advantage in a lawsuit. For example, in Japan, if mortgage is registered, it is unnecessary to acquire the name of the obligation (judgment) by a court, and the court can immediately start the procedure of repossession as soon as plaintiffs submits a certificate of the registry where the mortgage is registered. Introduction of a mortgage enforcement system that integrates mortgage registration and procedures of mortgage enforcement at a court is necessary for stable and smooth operation of mortgage in Myanmar.

Currently, the Condominium Law admits unit ownership, and at the time of sales, purchasers are required to register their ownership of a unit and a shared land in the registration record under the jurisdiction of MOC. Although it is possible to understand this as a system equivalent to registry of immovable properties, it is not currently considered whether it is possible to register mortgage in this registration record. If it is possible to register mortgage in the same registration record, the registry becomes a strong evidence in a lawsuit, so that it increases legal stability of mortgage as a collateral of mortgage loan. In addition, since the registration system of MOC for housing units which are subject

of the Condominium Law requires registration of ownership of a shared land, it is necessary to operate the system in conjunction with the registration system by MOALI, and avoid mutual contradiction among each registration system. This matter is under discussion between MOALI and MOC. The same matter is applicable when the Apartment Act on low cost housing units is enacted. If unit ownership is also granted for low cost housing units, its operation needs to be consistent with the registration system of MOALI. Furthermore, if mortgages can be registered, it must be effective for provision of mortgage loan.

### **8.2.3 Establishment of Public Housing Finance Special Zone**

Since revision of legal system takes a long time, as a more immediate measure, it can be considered to enact for the establishment of a public housing finance special zone system. In this system DUHD or each city development committee specifies individual collective housing in specific areas such as Yangon, Mandalay, Naypyidaw, etc., as special zones. In the zones housing sale, registration, mortgage loan, collateral setting, loan management, execution procedure at the time of default, will be conducted in accordance with special unified system which is different from general Myanmar laws and rules. The administration and management of housing designated as a special zone is carried out by DUHD or each city development committee, and it excludes the intervention of court and other ministries as much as possible. If such a special system allows successful management of public housing and mortgages, it can be expected that such experience spreads to local areas and eventually leads to nationwide reform of the law.