1. Introduction

Asia Pacific is experiencing multiple dynamics of urbanisation, economic growth, poverty and environmental deterioration. It is the largest region with more than 60 percent of the world population. About 43 percent of the total population in the region live in urban areas, of which 40 percent live in slums and substandard conditions. In the past 30 years, the urban population in Asia Pacific has increased by 560 million (i.e. 260 percent) and is expected to increase by 1,450 million (i.e. 250 percent) in the next 30 years. This unprecedented urbanisation process puts great challenges on cities and countries to provide adequate housing and urban infrastructure.

Housing and infrastructure development are in serious backlog. The need for financing housing and urban infrastructure in many Asia Pacific developing countries is immense. However, many countries face an overall scarcity of adequate funding. There are many reasons which lead to this huge funding deficit in housing and urban infrastructure. Housing and urban infrastructure are not regarded as a productive sector and are given low priority in resource allocations. Local municipal governments often have very limited tax powers; their municipal revenues are low; they receive insufficient fiscal transfers from the central government. Local municipal governments’ access to the capital market and debt financing is limited. Although there are a wide range of funding instruments available in Asia Pacific, the funding options are limited for many individual developing countries. The majority of the Asia Pacific developing countries face significant challenges in their funding of housing and urban infrastructure.

Financing is a key element which can determine the success of the future efforts in developing adequate housing and urban infrastructure in the developing countries of the region. This paper looks at the major financing instruments for housing and urban infrastructure in Asia Pacific and how we can learn from each other’s experiences and practices in order to promote innovative financing mechanisms, policies and strategies to meet the challenges of raising adequate and additional resources to fund increasing
2. Housing Finance

The housing finance market development is at different stages for different countries. China, South Korea and Japan have a relatively well developed mortgage finance market. China has the largest mortgage finance market, followed by Japan. While some countries such as Mongolia recently just embarked on mortgage finance development. The diversity of Asia provides a good arena for experimenting different finance instruments. This section will look at the various housing finance tools and instruments currently prevailed in Asia Pacific.

Globalisation also drives the process of financial liberalisation in Asia Pacific. Asia Pacific financial markets are becoming more open. The inflow of foreign financial intermediaries and reforms and deregulation of financial markets increases the efficiency of financial markets and promotes the inflows of capital and development. This has been the experience of Asian emerging markets in particular. The increased efficiency will be transformed into high returns for savings and investments, and cheaper costs of funds for borrowers, which will facilitate the growth of the financial markets and reduce the interest rates of mortgage finance to increase affordability and accessibility. For example, the interest rate of mortgage loans for a 20 year period is currently about 5 to 6 percent in China, compared to about 15 to 20 percent in some African countries.

Major Housing Finance Instruments in Asia Pacific

a. Commercial Banks

Commercial banks are the most common institutions which provide housing finance, particularly mortgage loans in most Asia Pacific countries such as China, India, Japan and Indonesia. They raise capital mainly by means of deposits, sometimes by issuing bonds and by securitising loans. Commercial banks pool large amounts of deposits and act as intermediaries to manage the mismatches between mostly short-term deposits and often long-term housing loans.

b. Housing Banks

Housing banks play different roles in Asia Pacific. In some Asia Pacific countries, housing banks play a regulatory role or supplementary role in housing finance. India’s National Housing Bank is mainly a regulatory role. In China, housing banks played an experimental role in housing finance and exited to exist when commercial banks assumed mortgage finance. In some Asia Pacific countries, specialized housing banks are developed as a main instrument for housing finance. In such housing banks, the government often plays an important role. For example, the government-owned Korea
Housing Bank (including its National Housing Fund) accounted for 80% of the country’s total housing loans in 1997. Housing bank has been one of the most commonly used instruments by governments. The Thailand Government Housing Bank introduced housing loans which are financed through bonds to avoid the mismatch of long-term finance and short-term deposits and also reduce costs to make loans more affordable.

c. Mortgage Institutions

Specialised mortgage institutions are another type of housing finance instruments. Countries and Regions such as Bangladesh, Pakistan, Mongolia, Hong Kong and Malaysia developed specialised mortgage finance institutions. However, most of mortgage finance loans in Asia Pacific were provided by non-specialised mortgage institutions. China, Japan and Hong Kong are respectively the largest mortgage finance markets, where the non-specialised mortgage institutions dominate the mortgage finance market.

d. Mortgage Insurance

Hong Kong has been actively promoting the mortgage insurance programme through Hong Kong Mortgage Corporation. The Thailand Government Housing Bank started to promote mortgage insurance in 2005. The introduction of mortgage finance can make mortgage finance more affordable and accessible to low and middle income households.

e. Hire-Purchase Programmes

Hire-Purchase programmes help low income groups and those with poor creditworthiness and those who can not afford the down payment to purchase housing units. It gives low income people to access to housing through rental approaches and be given the option to purchase their occupied rental housing units within a period (for example, 3 – 5 years) if they can prove their creditworthiness and able to make regular instalments.

f. Specialised Housing Funds

Various types of dedicated Housing Funds have been developed to target different streams of population to meet their housing needs. Some target the poor families such as Urban Community Development Funds, Urban Poor Funds. Some target the general population such as housing funds in China and Singapore. In 1984, Turkey established Mass Housing Fund (MHF) to provide a substantial, steady inflow of funds for financing housing.

MHF was mainly funded through taxes on certain imports as well as on consumption of petroleum products. It makes loans at subsidized and low interest rates. It does not mobilize savings from households, and therefore can be regarded as a fiscal instrument.

Thailand established a special fund (i.e. Urban Community Development Fund) dedicated to the improvement of the poor’s livelihood and housing. The Urban Community Development Fund supports poor communities to organize savings groups and improve their capacities to manage their fund or loans for community development activities.
Urban Community Development Fund provides three loan types to community savings groups: loans for community development revolving fund, income generation loans and housing loans.

**g. Contractual Savings and Loans Programme**

Economies like China, Hong Kong and Singapore developed contractual savings and loans programmes. In Singapore, the compulsory savings scheme - Central Provident Fund (CPF) is required for all citizens and permanent residents. Contributions to CPF come from two related sources: payroll deduction of a certain percentage of an employee’s salary, and employer contributions equivalent to a specific percentage of the employee’s salary. The percentages are adjusted from time to time to reflect economic performance, market conditions and ages of employees. The combined contribution rate was as high as 50 per cent of an employee’s salary and could be as low as 8 percent.

China introduced a housing contractual savings scheme - Housing Provident Fund (HPF) after the success of Shanghai pilot in 1991. Employees and employers are required to contribute an equal percentage of an employee’s salary to the fund which can only be used for the employee’s housing related needs such as purchase of housing and housing maintenance. HPF is a key player in providing affordable housing finance in China. The interest rate of HPF loans is lower than those provided by commercial banks.

India also developed contractual savings programmes through Housing Development Finance Corporation at some stage but ceased to function later.

**h. Securitisation**

Securitisation has been adopted by many countries in Asia Pacific as a means to raise capital. However, the growth of securitisation is slow in Asia compared to other regions. This is partly because the mortgage finance industry itself is small. The mortgage to credit ratio is 5 percent in Asia, which is lower than any other region (Figure 1).

![Figure 1 Mortgage to Credit Ratio](source: Asian Development Bank)
Between 2000 and 2006, annual mortgage-based securities (MBS) issuance increased from US$ 3 billion to US$ 44 billion which is much faster than the growth of asset-based securities. In Hong Kong, India, Japan, South Korea and Malaysia, housing institutions led to this MBS growth. Government housing institutions are the key actors in the growing MBSs and in the domestic bond markets.

j. Mortgage Loans by Governments

Some countries like Singapore offer mortgage loans by governments. In Singapore, the mortgage loans by the government are targeted at the public homebuyers who qualify for subsidised mortgage loan interest rates. These loans are repayable to the government over 20 years at low interest rates. In Thailand and South Korea, the government housing institutions provide more mortgage loans than their private counterparts.

k. Housing Subsidies

Many countries in Asia Pacific have housing subsidies programmes. They can be direct subsidies such as those built into the salary system in China. They can be interest rate subsidies such as those in Iran. They can be targeted to the extremely low income groups such as those in India. They can be development-related subsidies such as provision of low price land for housing such as those in China, Hong Kong, Malaysia and Indonesia.

l. Cross Subsidies

Cross subsidies are achieved through the different streams of income people in a single or multiple projects, where rich people subsidise the low income people. Alternatively profit-making projects subsidise non-profit making projects. This type of subsidies is practiced in countries such as Sri Lanka, Indonesia, Malaysia, China and India.

m. Housing Microfinance

Countries like Indonesia, Philippines, Bangladesh and India developed viable housing microfinance products which are particularly fit to the need of low income people for housing improvement. The Community Mortgage Programme in Philippines is a microfinance programme. It provides loans from US$ 360 to US$ 1,927 per household from poor households to purchase land lot or to develop site or to construct their houses.

The Grameen Bank in Bangladesh provides housing microfinance to the poorest. It provides three types of micro loans such as Pre-Housing Loans, Basic Housing Loans, and Moderate Housing Loans. The maximum loan sizes for these three types of loans are respectively, US$ 177, US$ 250, and US$ 521.
n. Non-Governmental Organisations, Community-Based Organisations and Cooperatives

Non-governmental organisations (NGOs), community-based organisations (CBOs) and Cooperatives can serve a large segment of the low income housing finance market. “These are considered to be more efficient and effective since they tend to have ‘grassroots’ presence among the poor. Although NGOs have access to the poor, examples of such bodies providing or facilitating home loans are still a rare phenomenon. However, some NGOs and CBOs are slowly becoming involved in this segment. The purpose of the loan is generally fixed, conventional and non-conventional collateral is required, the loan maturity is medium to long and the repayment schedule is flexible”. Community-based initiatives are well developed in countries such as India, Philippines and Thailand.

3. Financing Urban Infrastructure

Cities serve as engines of economic growth. Urban infrastructure is the backbone of cities - connecting functions within and between the cities to provide basic services to citizens and to promote economic growth. Sustaining this growth requires adequate provision of infrastructure. Large volumes of investment are needed to address the gap between the urban infrastructure needs and the current level of investments. It is estimated that our cities would require US$250 billion to US$500 billion over the next five years to finance basic infrastructure needs, which is a precondition to ensure that cities remain to be vibrant growth centres.

This section provides an overview of urban infrastructure financing challenges facing municipal and central governments, and looks at the major instruments that are available to finance urban infrastructure, and its policy implications.

Investment in urban infrastructure is not keeping pace with growing needs. Funding is a key constraint. Most Asian and Pacific cities are economically powerful, but many municipal governments remain poor. The rate of urbanization is much higher than the financing capacity of municipal governments to provide adequate infrastructure in many developing countries.

Municipal governments lack adequate power to raise revenue and to control their own financial resources. As a result, they are often heavily dependent on intergovernmental transfers and grants which are neither stable nor timely.

In many cases the borrowing power of municipal governments to finance urban infrastructure is legally constrained by regulations and complex legislative decisions. Participation of private sector investors as the source of capital, technical assistance and management capabilities is limited by perceived high risks that demand sovereign guarantees and risk sharing mechanisms. Participation of other main actors, such as NGOs, civic institutions, individual citizens, academia and interest groups in financing urban infrastructure and capital intensive projects is still limited and constrained by inflexible governance structure and the weak power of local municipal governments in raising and using funds.
**Major Urban Infrastructure Financing Instruments in Asia Pacific**

The following are the key urban infrastructural financing instruments currently practiced in the Asia Pacific region:

a. **Project Finance**

Project finance for urban infrastructure, involves creating a legally independent project company, typically a Special Purpose Vehicle (SPV) which is often used as a business entity for debt financing of urban infrastructure. The project assets are mortgaged to the SPV and the cash flows are escrowed into a separate bank account, with the first charge on its belonging to the lenders or investors.

b. **Land-based Revenue Generation**

Land is a potent resource, and unlocking its monetary value is an excellent source of capital for urban infrastructure projects. Land-based revenue generation is mainly through land sale and property tax. Many Asian cities raise considerable revenues from land sale. It is a key municipal revenue source for Hong Kong and other Chinese cities. In India, property tax accounts for about 25 – 35 percent of local revenue sources.

c. **Pooled Finance**

Pooled finance is an approach under which appropriate mixes of urban infrastructure projects are bundled together for the debt market financing. The projects should be chosen in a way which can diversify away and mitigate the individual project risks. This is often achieved by choosing projects with robust enough cash flows, which imparts an element of credit protection against revenue shortfall in the other projects. This financing instrument is typically used to leverage investments into smaller municipalities, by mixing them with projects from more credit worthy and larger municipalities.

d. **Credit Enhancement Facility**

In order to facilitate the development of the debt market financing, it is often necessary to increase the credit worthiness of urban infrastructure investments by providing additional layers of credit protection. Such additional protection would lower the cost of capital.

Such credit enhancement can be provided directly through a guarantee fund, or by purchasing guarantees from financing institutions willing to underwrite the risk of a cash-flow shortfall. All this additional layers of credit protection, over and above the Project cash flows, is meant to mitigate the risks, lower the cost of capital and thereby encourage the growth of a debt market in urban infrastructure projects.
UN-HABITAT Slum Upgrading Facility (SUf) and its Experimental Reimbursable Seed Operations (ERSO) are used by municipal governments as a means to develop pro-poor "bankable" projects and make use of credit enhancement to leverage domestic bank lending to finance housing and urban infrastructure through end users participation and micro-finance institutions.

e. Decentralisation of Financial Responsibilities to Local Governments

Decentralisation is a key instrument to improve the financial capacities of local governments in some Asian countries, particularly in China. China is vigorously promoting decentralisation since its reform policy in 1978. Cities are given power and incentives to raise funds in various ways including from the market and breaks its dependence on higher levels of government for funds. Decentralisation of governmental functions is truly matched by its financial decentralisation. Now China is the most decentralised country in the world in terms of public resource allocation. Local governments in China account for about 70 percent of total public expenditure, which is higher than any other country in the world.

f. Financing Urban Infrastructure through Privatisation

Financing urban infrastructure can also be achieved through privatization. In this case, local governments should ensure that the infrastructure built can be accessed by the urban poor and marginalized groups. The privatization of water services in Jakarta, Indonesia, is an example of successfully achieving this balance and delivering services.

g. Private-Public Partnership

The private sector gained a lot of experience in investing and managing infrastructure over time. In general a good regulatory system needs to be in place in order to secure the smooth cooperation between the public and the private sector. The possibilities of the private-sector-participation involvement are numerous. It starts with the possibility of contracting private companies for certain services and leads further to building and operating infrastructure facilities or to provide a concession to a private company to run the facility over a certain time.

h. Community-based Funding of Urban Infrastructure

Community-based funding of urban infrastructure has its advantages to promote equitable access to urban infrastructure for the poor people. Self-Employed Women’s Association (SEWA) in India is a leader in promote community-based urban infrastructure financing. It provides members with loans to improve their shelter and access to infrastructure services, and enables families in underserviced slum areas to access infrastructure services including water supply, sewerage, roads, and lighting. The Community-Led Infrastructure Finance Facility (CLIFF) is another active player in Asia Pacific and provides venture capital and other financial products to fund and improve access urban infrastructure for the poor communities.
j. National Resources for Financing Urban Infrastructure

There are several sources of national funding for urban infrastructure. Firstly, the central government funding through inter-governmental transfers and grants; Secondly, credits from national banking institutions. Thirdly, create a savings culture and encourage citizens to deposit legal funds in their own country. Fourthly, in many developing countries there are large scale pension schemes. In order to administrate the pension funds well, the pension fund management is looking for risk-averse investment opportunities. Investments in infrastructure normally seem very appropriate and safe investment, because national and/or local governments are committed and normally provide the revenues of the user fees as collaterals. With a well-qualified management the infrastructure facilities normally could perform very well.

4. Conclusions and Recommendations

Housing Finance

Housing finance market is small in Asia. But there are great potential to develop the housing finance market and mechanisms. For Asian economies, the challenge to meet housing needs in this 21st century is to develop national housing finance instruments most fitted to their distinct housing needs. A crucial task is to develop the necessary internal conditions or/and instruments for mobilising domestic savings. A market-oriented enabling domestic environment is vital for mobilising domestic resources. Countries are encouraged to introduce economic and financial reforms to liberalise their domestic financial markets to enhance the efficiency, coherence and consistence of their domestic financial markets.

Countries should pursue good governance in the housing finance industry to build trust for the investment of the private sector in the housing sector. They should pursue their appropriate policy and regulatory frameworks to their own country conditions and realities to foster the development of market-oriented housing finance mechanisms and instruments. Countries should introduce appropriate property rights reforms and respect the private property rights and freedom to transfers to foster the development of mortgage finance.

Countries should introduce appropriate measures fitted to their own country conditions to attract the investment of the private sector and individuals in the housing sector and to develop their domestic capital markets to mobilise capital for housing finance and to develop the securitisation instruments to mobilise resources to finance housing development and home purchase.

Housing microfinance products should be promoted to reach the poorest segment of the populations, particularly in those countries which have a large proportion of poor population. Countries should be encouraged to develop appropriate subsidies programmes to target the poor people and to meet the social needs of the housing sector. Countries should be encouraged to motivate the initiative and roles of individuals and groups through community-based and cooperative housing organisations.
Local governments play a very important role. Countries are encouraged to introduce fiscal decentralisation to strengthen the fiscal and financial capacity of local governments for housing and urban development at local levels.

**Financing Urban Infrastructure**

There are huge gaps between urban infrastructure needs and the current level of investment in many Asian Pacific countries. Urban infrastructure development can not catch up with the rapid urbanisation process and growing urban populations. This is reflected in the poor physical conditions and operational inefficiency in developing countries, particularly in South Asian developing countries, which are characterised by lack of basic urban infrastructure and services. Some of these areas are turned into slums.

Local municipal governments are lack of financial resources to meet the increased infrastructure needs. In order to bring urban infrastructure to an acceptable level, local governments must be empowered to raise and manage their own financial resources. They should increase their share of public resources. They should be able to access the capital market. It should also encourage the involvement of the private sector, NGOs and other social and political forces.

To attract the private sector to become actively involved in financing urban infrastructure, the improvement in urban governance is essential. Democratic decision making, community participation, inclusiveness, equity, empowerment, and people-centred development of urban governance ensure that city affairs are run by competent people and to ensure that public resources are shared by the entire community and that resources are also allocated to those most in need. The interest of the private sector is taken care of. The risks should be shared by the public sector. The private sector is good in managing risks of urban investment. The private sector participation and utilisation of the capital market should be the main mechanisms for urban infrastructure provision.

There is a great need for decentralisation of financial resources to the municipal government levels and community levels. One strategy to improve equitable access to urban infrastructure for all is to promote community-based funding initiatives and mechanisms. The potential of resources which can be available to local governments are far from being utilised by local governments. Significant results can be achieved through opening up local tax revenue bases for local governments and access to the capital market to raise funds to finance urban infrastructure projects. Many Asia Pacific developing countries need to develop their capital market and their local municipal governments should be allowed to borrow to make capital expenditures.

The key determinants for future progress in financing urban infrastructure and services are governance reforms through decentralisation and empowerment of local governments, advocating legislative reforms to open access to innovative urban infrastructure financing schemes. Continued governance reform to promote decentralisation that enables local governments and other urban actors to take part in the inclusive and participatory urban decision making and implementation. Local governments are empowered to raise and
manage financial resources. All these immediate agendas will positively affect the
capacity of municipal governments to attract financing for important initiatives and
activities and act as developmental agents to contribute to better local, national, and
regional economic, social and environmental development.

Effective legislative measures and reforms should be promoted to direct and extend urban
actors’ mandate and participation to develop and implement innovative local sources of
funds to finance urban infrastructure projects and maintenance and to empower local
municipal governments to have control of their own financial resources.

Local municipal governments should also make efforts to develop 'bankable' urban
infrastructure programmes and projects and to attract and manage the financing, in terms
of mechanisms, structures and capacities, at the local government level and with partners.
This could be done in conjunction with improved revenue collection through the
improvement of information system on revenue sources and payers and service delivery
results.