

A STIMULUS PLAN FOR AFFORDABLE HOUSING
SOLUTIONS IN EMERGING NATIONS

by
Amy Henley Sodeinde

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Introduction

Enormous pent-up demand for adequate and affordable housing exists in the world today. The United Nations Center for Human Settlements-Habitat (UNCHS Habitat) has estimated that 1.1 billion of the world's 3.5 billion urban dwellers are living in inadequate housing conditions (1999). This translates to more than 31% of the world population living in inadequate housing conditions in urban areas alone. If rural areas are included it is speculated the number could very well be twice as high (Magowan, 2008).

Data suggests the problem is only becoming greater. A severe imbalance of supply and demand for housing has made overcrowding, inadequate shelter, and homelessness commonplace in many regions of the world. Rapid population growth in emerging countries combined with urbanization has escalated the density of numerous cities intensifying the shortage of housing and basic infrastructure leading to growth in the number of slums, slum dwellers, and informal settlements. Yet at the same time many emerging nations are experiencing economic expansion, increase in the overall money supply, and growth in consumer spending for basic necessities such as housing. However, a number of issues and bottlenecks hinder the flow of capital to the housing deficit.

It is imperative that action be taken to stimulate affordable housing solutions for low-income and poor populations in the developing world. The enormity of the issue calls for expediency, focus, determination, resourcefulness, and ongoing evaluation for the strategy to be successful. Several strategic actions must be accomplished over the next five to ten years in order to effectuate the development of affordable housing solutions:

- ❖ Development of a Legal and Regulatory Framework
- ❖ Implementation of Government Initiatives
- ❖ Low Cost Housing Development
- ❖ Development of Infrastructure
- ❖ Mobilization of Funds

These strategic actions must be thoughtfully considered and adapted within the context of individual countries and regions to provide appropriate solutions.

There are a number of challenges that will be encountered in the process implementing the necessary strategic actions. These challenges include:

- ❖ Restrictive Access to Land
- ❖ Lack of Access to Capital
- ❖ Obtaining Construction Permits and Approvals
- ❖ Corruption
- ❖ Lack of Transparency
- ❖ Currency Risk
- ❖ Knowledge Gap
- ❖ High Interest Rates
- ❖ Financial Literacy

Overcoming these challenges will entail solutions adapted to the context of the local region. While different regions of the world and individual markets suffer challenges unique to themselves, at the same time the struggles are common to every marketplace and locality. The implication of this reality is that the difficulties, failures, and successes of one carry lessons for all and can form the basis for creating a strategic plan of action. With this in mind, we will draw on various examples throughout the world to propose solutions for overcoming these challenges fitted to the context of the local region.

Key Players for Creating Adequate Affordable Housing Solutions

Solutions for creating adequate affordable housing will not come from a single source. Collaboration from a number of key players is necessary to implement the strategies to stimulate adequate affordable housing solutions. Because of this a global body must be created to put a spotlight on the issues and bring all parties to the table for the purpose of coming up with effective strategies, identifying

best practices to address the challenges, and focusing directly on stimulating affordable housing creation. This organization should be made up of a diverse group of key players from around the world who are committed to the planning and implementation of affordable housing strategies and solutions.

Governments

First and foremost governments at the national, state, local or municipal levels are critical to the effective development of affordable housing and affordable housing finance. Governments set the direction, strategy, focus, and priorities of the region and people that they govern. They provide the legal and regulatory framework necessary for creating effective mortgage and financial markets, enforcing regulations and laws, and working toward a stable economy. In some cases governments have the capacity to encourage affordable housing through subsidies, tax incentives, or direct investment. Governments may initiate or co-sponsor housing development with an exit strategy leading to privatization. Governments are typically responsible for constructing and linking the community to infrastructure such as clean running water, sanitation, roads, power, and other resources including schools and transportation. In other words, governments have the power to create an enabling and conducive environment that encourages private development of adequate affordable housing.

Investors

Investors could include a variety of private investors, global investment banks, private equity firms, sovereign wealth funds, institutional investors such as pension funds and insurance companies, and the capital markets in general. This group provides an attractive and potentially long-term source of capital for housing. They have the greatest capability for fueling a well-capitalized funding facility. Investors have the ability to effectively facilitate the development of mortgage-related securities and also provide direct funding of construction and mortgages through debt and equity finance. They could be a source of investment for research and development of building technologies to lower the cost of affordable housing.

Local Finance Institutions

Local finance institutions such as commercial banks, mortgage banks, microfinance institutions, cooperatives, and credit unions are influential to facilitating affordable housing finance on the ground. They serve as the direct channel for credit underwriting, character assessment, and lending in the local currency to the local developers and borrowers qualified to take advantage of financial products designed to support affordable housing. These institutions create financial products that facilitate affordable housing and develop a fundamental primary mortgage market. In turn they are affected by the legal, political and economic environment which can either promote or hinder the flow of financial resources and affordable housing development.

International Finance Institutions

International Finance Institutions (IFIs) include prominent organizations such as World Bank, International Finance Corporation, International Monetary Fund, and regional development banks including Inter-American Development Bank, Asian Development Bank, African Development Bank, and European Bank for Reconstruction and Development. They consist of shareholders from various countries and major donor countries (typically United Nations countries and others that may be included). The primary mission is to assist in financing capital projects in developing countries designed to improve the quality of life in developing member nations. The International Monetary Fund specifically provides mechanisms for managing the global financial system (IMF, 2011). In 2009 the World Bank revamped its approach to urbanization. This new approach focuses on the systems of cities and how to take advantage of urbanization to harness growth and alleviate poverty within the context of the local urban environments. This strategy focuses on five themes: (1) focus on the core elements of the city system, (2) making pro-poor policies a city priority, (3) enabling city economies, (4) encouraging progressive urban land and housing markets, and (5) promoting a safe and sustainable urban environment. Some of the initiatives included are redevelopment and upgrading of slums and poverty reduction through

proactive policies promoting economic stability and growth, defined property rights, good investment climate, attractive incentive framework, well functioning markets, investments in education and infrastructure. World Bank is focusing on critical regions like Egypt and Morocco to assist in scaling up slum upgrading programs, provision of urban services, and ongoing assistance with land housing policy reforms designed to improve access to affordable housing for the poor. The World Bank is also exploring the idea of partial guarantees for capital market financing (World Bank, 2010). The International Finance Corporation (IFC) plays a critical role in promoting sustainable private sector development in developing nations as the largest multilateral source of debt and equity finance of private sector projects in the developing world. It does this by financing private sector companies and projects in the developing world, linking companies in the developing world to international finance markets, and providing consultation to businesses and governments (IFC, 2011). In 2003 IFC (which is part of the World Bank Group) invested in Dewan, India's first privately owned housing company founded in 1984. An Indian family required \$11,000 to acquire land for a home. No bank would provide the family a loan despite the son's earnings as an electrician and the matriarch's pension. Through a loan provided to Dewan by IFC, this family was able to gain access to credit allowing them to purchase the land for a home. IFC also provided technical assistance to Dewan to improve corporate governance, reporting standards, and compliance (IFC, 2010). IFIs are important to mobilizing resources, providing insurance and guarantees, bringing focus to critical needs, exerting influence, and offering technical consultation.

United Nations

The United Nations is an international organization made up of 192 Member States which is committed to maintaining international peace and security, developing friendly relations among nations, and promoting social progress, better living standards and human rights (U.N., 2010). The U.N. Human Settlements Programme and U.N. Habitat have brought attention to the global community of issues in the developing world with respect to housing rights, health and safety, land and tenure, poverty, and urban slums to name a few. In addition the United Nations plays an important role in providing data and

statistics that inform and assist in designing effective methodologies and strategies for combating the lack of adequate and affordable housing throughout the developing world.

Government Agencies

Government agencies designed to support private sector development in the developing world are an important source of private equity funding, insurance, and guaranty that help facilitate the development of affordable housing and housing finance. These agencies are influential in developing a system conducive to the creation of affordable housing and finance. For example, DEG is the German Investment Corporation financing investments of private companies in emerging economies (2011). Overseas Private Investment Corporation (OPIC) is a United States agency which helps mobilize private sector investment and provide risk management tools for investing in the developing world. It provides funding, guarantees and insurance for housing related products and helps U.S. businesses in the private sector grow through investment overseas. Its programs include mortgage financing, construction and development financing, lease purchase and mortgage securitization. It also insures U.S. investors against political violence, nationalization or dispossession by a foreign government, or the inability to convert local currency and send profits home (OPIC, 2008).

Development Organizations

Development organizations could include non-profit organizations, non-governmental organizations (NGOs) and community associations. These organizations are influential to varying degrees in the development of affordable housing finance. Often these groups may rely on donor support, grant monies, or in some cases government funding to pursue, within the context of affordable housing, social benefit, education and empowerment. These organizations are important for developing relationships at the ground level, educating, and providing direct action or active support of social initiatives. In many cases they help communities ‘find their voice’ and lobby local or national governments to lend their support for essential needs. Development organizations have the ability to

provide critical financial education, grassroots market development, and support of affordable housing initiatives especially in the initial stages of development.

Donors

Donors could be governments, foundations, international agencies, non-profits, private companies, and individuals who provide donated funds, supplies, labor or other resources for the mission of affordable housing. Some well-known examples of donor organizations might include USAID, Habitat for Humanity International, World Vision, The Bill and Melinda Gates Foundation, and more. In some instances donor organizations may spring to action during times of natural disaster, in some cases they provide financial support on a project by project basis, and in other situations they support a particular mission or ideal with short-term or long-term support. Donors often have the capability of providing “seed money” for a social mission or initial funding, labor, or other resources to unproven projects that otherwise may have difficulty obtaining financing.

Real Estate Developers

Real estate developers with the skill, knowledge and business capacity for land development and affordable housing development play an important role in subdividing land and developing the relevant type of housing for the target market, which could include single family dwellings or multifamily projects, at a price the target market can afford. In some cases real estate developers have provided seller financing when housing finance is inaccessible. With adequate capitalization and incentives, real estate developers can play a critical role in delivering supply to a grossly under-supplied market.

Home Building Supply and Improvement Retailers

Home Supply and Improvement Retailers are key players in providing credit options to low and moderate income households for home building supplies. Progressive home building is a typical method of building homes for many low and moderate income households. Financing home building supplies

provides a platform for assisting these households to build a better quality home more quickly. In addition home building supply and improvement retailers who invest in research and development could create building supplies that are affordable, quality, sustainable, and easy to assemble for a captive market.

Low Income Households

Moderate and low income households are the target market of adequate affordable housing.



These households could be candidates for affordable rental housing or for affordable home ownership. As such this group should have significant importance and influence in the creation of affordable housing and related finance. The housing product and the finance product should be designed to meet the need of this target market.

Incorporating these households into the development of adequate affordable housing solutions and products in a way that is relevant to the culture and behaviors of the target market could find better, more successful outcomes.

Background

Before specifically addressing the strategic actions and challenges, let us review the underlying data and information that will serve as a foundation for understanding the issues surrounding adequate affordable housing in emerging markets.

What is Adequate Housing?

The definition of adequate housing has been defined both broadly and in more straightforward fashion. The broad definition was provided in a 1991 statement from the Committee on Economic, Social, and Cultural Rights which monitors the International Covenant on Economic, Social and Cultural rights: While the definition of ‘adequacy’ with regard to housing is influenced by social, economic, cultural, climatic, ecological, and other factors, certain aspects of the right are applicable in any context. The aspects identified by the committee were the following:

Legal security of tenure. Security of tenure means that all people in any living arrangement possess a degree of security against forced eviction, harassment, or other threats. States are obliged to confer this security legally.

Availability of services, materials, facilities and infrastructure. To ensure the health, security, comfort, and nutrition of its occupants, an adequate house should have sustainable access to natural and common resources, safe drinking water, energy for cooking, heating and lighting, sanitation and washing facilities, means of food storage, refuse disposal, site drainage and emergency services.

Affordability. Affordable housing is housing for which the associated financial costs are at a level that does not threaten other basic needs. States should take steps to ensure that housing costs are proportionate to overall income levels, establish subsidies for those unable to acquire affordable housing, and protect tenants against unreasonable rent levels or increases. In societies where housing is built chiefly out of natural materials, states should help ensure the availability of those materials.

Habitability. Habitable housing provides the occupants with adequate space, physical security, shelter from weather, and protection from threats to health like structural hazards and disease.

Accessibility. Adequate housing must be accessible to those entitled to it. This includes all disadvantaged groups of society, who may have special housing needs that require extra consideration.

Location. The location of adequate housing, whether urban or rural, must permit access to employment opportunities, health care, schools, child care and other social facilities. To protect the right to health of the occupants, housing must also be separated from polluted sites or pollution sources.

Cultural adequacy. The way housing is built, the materials used, and the policies supporting these must facilitate cultural expression and housing diversity. The development and modernization of housing in general should maintain the cultural dimensions of housing while still ensuring modern technological facilities, among other things (paragraph 8).

A more succinct definition comes from The Commission on Human Settlements. Adequate shelter means ... adequate privacy, adequate space, adequate security, adequate lighting and ventilation, adequate basic infrastructure and adequate location with regard to work and basic facilities - all at a reasonable cost (UNCHS, 1998)

What are the social benefits of affordable housing?

The provision of adequate affordable housing provides more than just shelter or a place to stay. Adequate affordable housing has a transformational affect on people and communities. Habitat for Humanity International (www.habitat.org) is driven by its belief in the empowering possibilities adequate affordable housing can provide. The organization has seen the following results in its endeavor to provide clean, decent, stable housing around the world: (1) Families can provide stability for their children, (2) A family's sense of dignity and pride grow, (3) Health, physical safety, and security improve, (4) Educational and job prospects increase (Habitat, 2011).

Inadequate housing has a detrimental impact on the physical and emotional development of children. Adequate affordable housing has the ability to provide stability to a child's life allowing the opportunity for healthy development.

Personal pride and community spirit is a further benefit derived from access to affordable housing. Adequate housing improves the confidence and pride one has in him- or herself. In countries where women have been at a disadvantage or treated as lower-class citizens, titling land in the name of a female household member can improve self-esteem, social status, and access to resources that would never have been available under typical circumstances. Housing creates community empowerment and identity where neighborhoods encourage civic responsibility and activism. In tandem with this is community organization and protection in which crime and violence is reduced creating a sense of security and safety.

Inadequate housing contributes to diseases associated with poverty such as HIV/AIDS, malaria, gastrointestinal diseases, and tuberculosis. Clean and safe housing with access to clean water, sanitation and energy sources creates a healthier living environment. In fact Emory University conducted a study on Habitat for Humanity's work in Malawi and found that Habitat housing improved the health of children as much as water and sanitation programs (Wolff, et al, 2001).

Housing serves as a stimulus for economic and educational opportunity. Land and home ownership is a vehicle for financial prosperity for low and moderate income households in the form of equity and savings. Securing title to land provides access to credit and can serve as the greatest potential generation of wealth for a family (Habitat, 2011). Housing development creates construction jobs and further stimulates entrepreneurial businesses offering goods and services thereby generating better incomes and spending power. Quality housing inspires a desire for quality schools and encourages educational pursuits.

What are the financial benefits of affordable housing?

Finding a way to tap into this market via creative and innovative approaches designed to make housing affordable presents not only an opportunity to impact social change on a global level by improving the quality of life for people and communities around the world, it represents an opportunity to make a substantial financial return on one's investment. According to the World Resource Institute, housing is one of the larger markets for the 4 billion persons worldwide that comprise the bottom two-thirds of the income pyramid, commonly referred to as the BOP (bottom of the pyramid). Conservative estimates suggest \$331.8 billion is spent annually on housing alone in the BOP segment with \$187.5 billion of that number spent in the thirty six low and middle income countries closely tracked throughout Africa, Asia, Eastern Europe, Latin America and the Caribbean. Furthermore, the BOP housing market has shown a willingness to spend a consistent portion of income on housing for primary expenditures such as rents, mortgage payments (imputed rents), repairs and other related services (WRI, 2007).

International investment for affordable housing in emerging countries can offer attractive returns. During a 2009 panel discussion of real estate in emerging markets at the Wharton School of Business, well-known real estate investor, Sam Zell, suggested the reason to invest in emerging markets is because of demand. When the world begins to recover from the current economic turmoil, according to Zell, the populations in these regions will be looking to fill their basic needs first, like housing. That's not the case in markets like the U.S., Japan and Western Europe, where the only play has been to leverage things up. And although growth in emerging markets has slowed considerably from 100% to 60%, that's still 60% [growth] over zero (Wharton, 2009).

The global urban population growth combined with growing economic potential of emerging countries paves the way for high impact returns to investors. A survey by Baring Asset Management in August 2010 found that 67% of 136 investment professionals surveyed said clients should increase emerging market exposures over the next year (Verma, 2010). Richard Urwin, head of investment within Black Rock's Fiduciary Mandate Team, is convinced emerging market investment returns are likely to outperform those in the developed markets once again in 2011. His confidence in emerging markets is

particularly invigorated by a more robust recovery in the emerging world than in the developed world over the past 18 months along with the existence of fundamentals for superior growth: savings ratios are high, budget deficits are low, financial systems are stronger, demographics are more supportive and there is still scope for productivity catch-up with the developed world (Urwin, 2010).

Pension funds seeking impressive investment options with long term horizons are looking more closely at opportunities in emerging markets. European and U.S. pension funds are wrestling with how to provide a large number of baby boomer retirees with stable incomes in an environment still recovering from the greatest financial crisis since the Great Depression. According to Erik Valtonen, chief investment officer of the Third Swedish Pension Fund (AP3), the crisis has highlighted a contrasting world in which you have a developed world struggling with aging population and high debt burden and developing world with younger population and higher growth. Valtonen states that pension funds are increasingly interested in emerging market equity and debt (Verma, 2010).

It is clear the financial markets believe tremendous upside exists in the emerging market countries. Citi has identified twelve megacities they believe will lead the way. These cities are predicted to see tremendous GDP, population, and per capita GDP growth over the next fifteen years. This growth translates into increased spending power. Not counting cities in China, 7 of the 12 are located in emerging markets other than China. These 7 cities include Sao Paulo, Brazil (#2); Mexico City, Mexico (#3); Buenos Aires, Argentina (#5); Mumbai, India (#6); Moscow, Russia (#7); Delhi, India (#10); and Rio de Janeiro, Brazil (#12). Including China 11 of the 12 cities identified are in emerging market countries. Chinese cities making the top 12 include Shanghai (#4), Hong Kong (#8), Beijing (#9), and Guangzhou (#11) (Badkar, Lubin, 2011). HSBC predicts the world's biggest economies will be found in the following emerging nations by 2050: Russia (#15), South Korea (#13), Turkey (#12), Mexico (#8), Brazil (#7), India (#3), and China (#1) (White, 2011).

Trends Indicated by the Data

Housing Supply

It has been well-documented that the supply of housing especially in the developing world is well-short of the demand warranted by moderate to low-income households. In 2009 Housing Skyline of India reported that 10.5 million houses will need to be built over the next six years to meet demand in urban India alone (Indicus, 2009). In Nigeria the Lagos State Minister of Housing estimates the state (which is home to the city of Lagos, one of the world's most densely populated cities) requires the addition of 224,000 housing units annually to keep up with demand (RIRFHU, 2009). Sociedad Hipotecaria Federal reported that Mexico had a housing shortage of 8.9 million units at the end of 2009 (Rodriguez, Caraveo, 2010). In 2009 the Department of Human Settlements in South Africa estimated the backlog of housing units to be 2.1 million in the country (DHS, 2009). As urban populations continue to grow in the developing world the severity of the gap will only continue to widen.

Population Growth

In 2009 the United Nations estimated the world population to be 6.83 billion. Of this number 5.6 billion people (approx. 82%) are estimated to reside in less developed regions of the world. According to the U.N.'s classification, less developed regions are described as all countries and areas of Africa, Latin America, Asia (excluding Japan), and Oceania (excluding Australia and New Zealand) (UNCHS, 2005). Revised population projections are made every two years. As of 2009 revised projections indicate the world population will be 8.01 billion by 2025 with 84% found in less developed regions. Projections for 2050 estimate a world population of 9.15 billion with 86% projected to be found in less developed regions of the world (U.N., 2009).

	Total Population			Urban Population			Rural Population		
	Estimates & Projections (billions)								
	2009	2025	2050	2009	2025	2050	2009	2025	2050
World Total	6.83	8.01	9.15	3.42	4.54	6.29	3.41	3.48	2.86
Less Developed Regions	5.60	6.73	7.87	2.50	3.52	5.19	3.10	3.21	2.69

World Urbanization Prospects: The 2009 Revision, United Nations

Population Concentration

As of 2008, 42 of the 50 most populous countries are found in emerging markets. The remaining eight most populous countries are represented by developed countries in Western Europe and the United States. China and India hold the #1 and #2 spots respectively with the United States taking the #4 slot. Indonesia, Brazil, Pakistan, Bangladesh and Nigeria are each included in the top ten. A sample of other emerging nations in the top fifty include countries in Latin America, Africa, Asia, and the Middle East including Mexico (#12), Vietnam (#14), Turkey (#18), Democratic Republic of the Congo (#19), South Africa (#25), Colombia (#29), Kenya (#35), Afghanistan (#39), Peru (#42), and Ghana (#49) (United Nations, 2009).

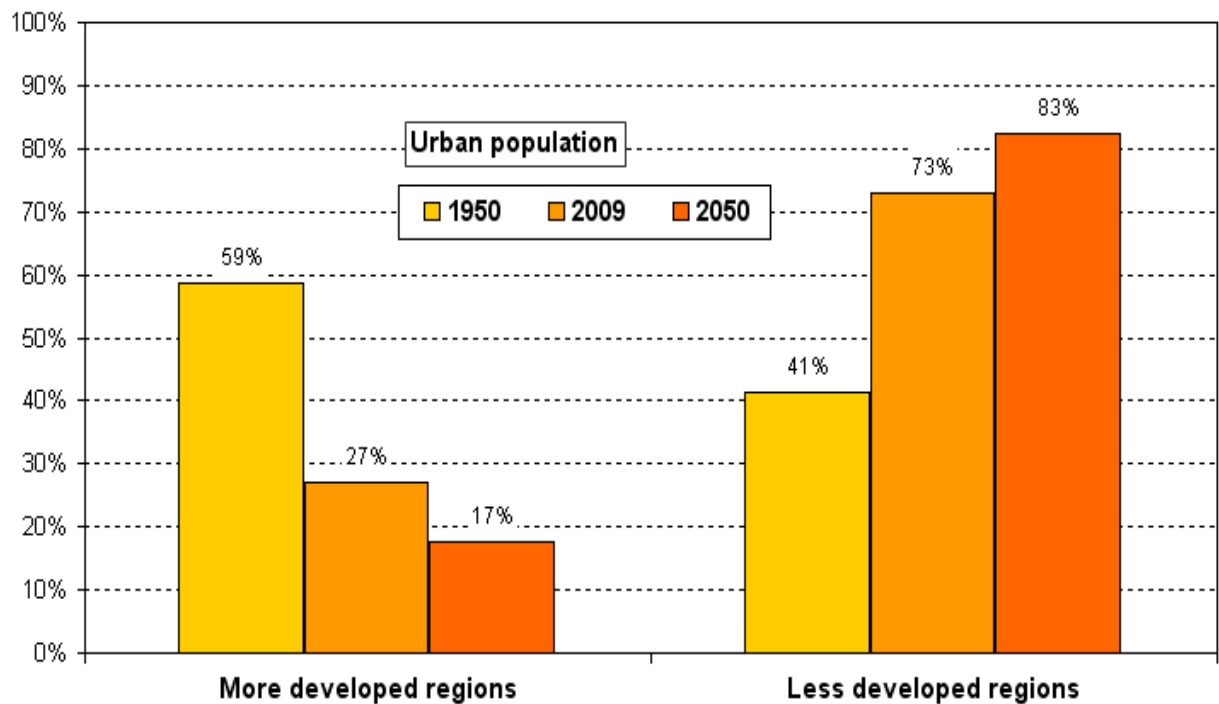


Globalization

The World population is making a dramatic shift to the cities. As of 2009 the global urban population surpassed 50% and by 2050 is anticipated to approach 69% (U.N., 2009). A recent report by the U.S. Central Intelligence Agency estimates that 50.5% of the world population is living in urban areas as of 2010. In fact the total world population is expected to increase by 2.3 billion between 2009 and 2050. At the same time, the population of urban areas is forecast to grow by 2.9 billion people (U.N. 2009). This implies that urban areas will absorb all of the population growth over the next 4 decades in addition to a transfer of approximately 600 million people from rural areas.

In 2007 David Satterthwaite of the International Institute for Environment and Development surmised that population growth is becoming largely an urban phenomenon concentrated in the developing world. His report estimated that Asia, in particular, is projected to see its urban population increase by 1.7 billion, Africa by 0.8 billion, and Latin America and the Caribbean by 0.2 billion. Less

developed regions of the world contained approximately 41% of the world's urban population in 1950 but 73% of the global urban population by 2009. According to the United Nations, by 2050 83% of the urban population is expected to be seen in less developed regions of the world as indicated in the chart below (2009).



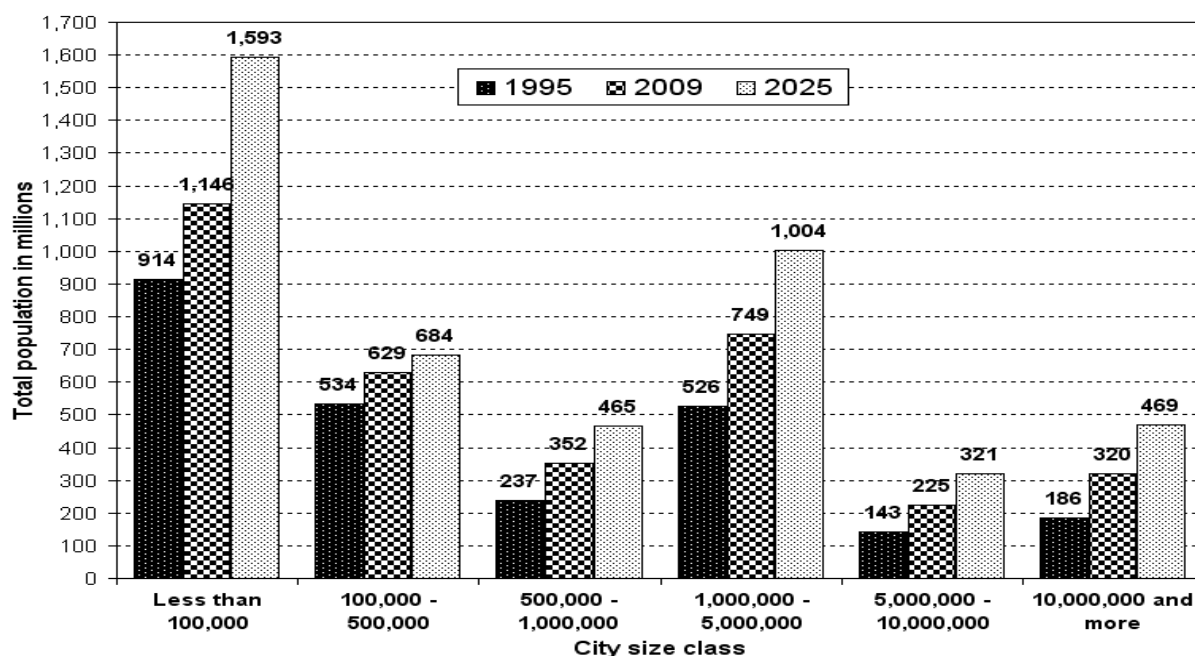
Source: United Nations, Department of Economic and Social Affairs, Population Division: *World Urbanization Prospects, the 2009 Revision*. New York, 2010

Growth of Cities in Emerging Countries

Megacities are defined as having a population of 10 million or greater. Until 1975 the United Nations identified only three megacities in the world: New York, Tokyo and Mexico City. Since that time the number of megacities has increased markedly with most new megacities growing out of the developing world. As of 2009 there are 21 megacities of which 16 are in developing countries. In addition 25 of the 30 largest urban agglomerations are found in developing regions of the world (U.N., 2009). A number of large urban agglomerations in emerging nations are expected to continue to grow

rapidly. For example, Lagos, Nigeria currently ranked #18 with an estimated population of 10.58 million in 2010 is projected to moved up to the #11 spot by 2025 with a projected population of 15.81 million. By 2025 the number of megacities is expected grow to 29 cities with Asia gaining five, Latin America two, and Africa one (U.N., 2009).

In 2009 cities of less than 100,000 inhabitants accounted for 1.15 billion or one-third of the world urban population. Approximately 749 million inhabitants are concentrated in cities with a size of 1 to 5 million. In contrast the 21 megacities of the world with 10 million or more in population account for 9.4% of the world urban population. Megacities contained 4.7% of the total world population in 2009. Another way of thinking of this is 1 in every 20 persons were living in megacities in 2009 (U.N., 2009).



Source: United Nations, Department of Economic and Social Affairs, Population Division: World Urbanization Prospects, the 2009 Revision. New York, 2010

As people make their way to the urban centers throughout the world in search of opportunity and a better life, they often find an already overcrowded environment. A case in point, the UN Millennium Development Goals Report of 2007 states that one out of three urban dwellers (approximately 1 billion people) was living in slum conditions as of 2005. People living on top of each other compete for a share

of local resources including basic needs such as food, water, shelter, energy and employment. According to Forbes 2007 report on *The World's Densest Cities*, the bulk of these big population centers don't offer high living quality, at least not yet (Malone, VanRiper, 2007). A number of the most densely populated cities are found in developing regions of the world. Leading the way are Mumbai and Kolkata, both in India, each of which pack in over 23,000 people per square kilometer. Both cities, along with those close behind like Karachi, Pakistan; Lagos, Nigeria; and Shenzhen, China, hold about as many people within a handful of square blocks as live in U.S. metros like Charleston, S.C., Green Bay, WI, or Berkeley, CA. There's a marked difference between heavily populated cities of relative wealth, like Seoul, South Korea or Taipei, Taiwan and Third World cities like Lima, Peru and Kinshasa, in the African Congo. Over the past 30 years, some poor countries have seen a mass migration of people from the countryside into cities, hoping to improve their lives. Many have to some degree--as things go from worse to bad (Malone, Van Riper, 2007).



Employment

High levels of unemployment and employment in the informal economy create challenges for affordable housing and associated finance in some emerging nations. Unemployment is a challenge in a number of countries where a lack of jobs or a lack of capable persons for certain types of jobs creates an imbalanced job market. South Africa is an example of high unemployment where employment in the range of 23% to 30% has been typical for the past 10 years. The latest data for the Dominican Republic as of 2007 indicated 15.6% unemployment, 40% in Kenya as of 2008, and 17% in Ethiopia as of 2006 (CIA, 2011; Global Finance, 2011). The informal employment sector refers to economic activity that is un-taxed, unregulated or unmonitored by the governing authorities and as such is not included in GDP. This sector could include street vendors, garment workers working from their home, garbage recyclers, domestic laborers, and informally employed persons of formal enterprises. In many developing

countries, a majority of workers are employed in the informal economy with low incomes, limited job security and no social protection (WTO, ILO, 2009). It is difficult to determine the informal sector but many estimates suggest 60% to 70% of the population in various regions make a living in the informal sector. Those employed in the informal sector are typically there because this is the only way of earning a living. Not only do these challenges equate to a loss of taxes and lack of economic productivity but it also limits both the demand for and access to loans and formal systems of finance.

Per Capita Income and Poverty

Low incomes and high levels of poverty are apparent in many emerging nation economies. Although unemployment in Bangladesh is low at 4.8%, it is estimated that 40% of the population is underemployed working only a few hours a week at low wages. Per capita income is \$1,700 per person as of 2010 with 40% of the population living below the poverty line (CIA, 2011). Brazil is a country which has seen drastic improvement in its economy and expansion of the middle class, and yet continues to suffer issues of poverty. Per capita income has grown to \$10,900 as of 2010; however, 26% of its population lives in poverty (CIA, 2011). A country of relative wealth due to oil resources, Nigeria's population has an estimated per capita income of \$2,400 with 70% of the population living in poverty. As of 2007 it was estimated that 21.5 million people in rural China are impoverished living on \$90 per year and an additional 35.5 million people live on no more than \$125 per year. India's per capita income as of 2010 was \$3,400 with 25% of its population living below the poverty line (CIA, 2011).

Growth of the Money Supply

Average annual growth rate in money and quasi money comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. In 2008 money and quasi-money growth in several developing countries was quite strong contributing to the global supply of available

money for lending and investment. For example Peru's annual growth was 23.2%, Nigeria 52.5%, Turkey 24.9%, Brazil 17.3%, India 20.5%, China 17.8%, and Democratic Republic of Congo a whopping 55.7% (World Bank, 2010).

Domestic Credit

In addition domestic credit provided by the banking sector in 2008 was 185% of GDP worldwide with South Africa at 215.5% of GDP, China at 120.8% of GDP, and Brazil 117.9% of GDP. In contrast Peru was 18.5% of GDP, Turkey 52.5%, Nigeria 26.7% and Democratic Republic of Congo 9.1% of GDP indicating barriers exist in facilitating domestic lending in these countries. In 2008 bank's non-performing loans relative to total gross loans was higher in countries like Egypt at 14.8% and Bangladesh at 11.2%, Pakistan 9.1%, Kenya 9%, Ghana 7.7% and Nigeria 6.3%; whereas non-performing bank loans were lower in countries like South Africa were 3.9%, Turkey 3.6%, Mexico 3.2%, Brazil 3.1%, China 2.4%, India 2.3%, and Peru 2.2% (World Bank, 2010).

Consumer Spending

The consumer spending power of emerging market economies is growing at a rapid rate. Euromonitor International studied 25 key emerging market economies including Argentina, Brazil, Chile, China, Colombia, Egypt, Hungary, India, Indonesia, Kazakhstan, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Romania, Russia, Saudi Arabia, South Africa, Thailand, the UAE, Ukraine and Vietnam (2010). These economies experienced 66% growth between 2000 and 2009 to reach \$7.5US trillion with forecasts predicting another 6.9% growth in 2010 to reach \$8.0US trillion. While these economies remain in the early stages of growth, the majority of consumer expenditures are currently for basic necessities like food and shelter. Housing accounted for 21.3% of spending in 2009 and is predicted to remain a steady portion of overall consumer spending in these countries from 2010 to 2020 (Euromonitor International, 2010).

Evaluation of the Data

A number of observations can be made from the data in the context of financing affordable housing.

- The limited supply of housing units in the developing world is contributing to issues of overcrowding, inadequate shelter, and homelessness.
- Population growth is occurring more rapidly in emerging nations.
- There is a global trend toward urbanization and the majority of the urban population growth is being absorbed by the developing world.
- Megacities are continuing to develop and often get a lot of attention; however, the majority of populations can be found in cities of less than 10 million people.
- Population growth is escalating the density of numerous cities throughout the developing world intensifying the shortage of housing and connections to basic infrastructure such as safe, clean water supplies and sanitation facilities. This has led to a growth in the number of slums, slum dwellers, and informal settlements.
- Unemployment, informal employment, low incomes, and poverty create supply and demand challenges as they relate to the provision of affordable housing and housing finance.
- Emerging nations are seeing economic growth which is fueling consistent consumer spending for basic necessities such as housing.
- While many emerging nations are seeing a growth in the money supply, lending is not being facilitated effectively. Mortgage markets are weak and capital is not flowing toward the housing deficit for the poor, low and moderate income populations.

How is housing financed in emerging countries?

A formal primary and secondary market of real estate finance with an adequate legal and regulatory structure and sufficient liquidity rarely exists in emerging markets especially for affordable housing. The wealthy often have resources or access to finance for housing. Effective programs to facilitate access to real estate capital and provide housing options, however, especially to the poor, low

and middle income populations are either non-existent or weak at best. In much of the developing world, the penetration of financial services to the low and moderate-income majority remains remarkably limited. Mortgage debt to GDP is only 3% in Brazil, 5% in India, 10% in Mexico, against 72% in the United States. (Magowan, 2008). It's quite common to find housing financed by informal systems via cash money, cooperative resources and labor from friends and family.

Some countries have made progress in developing a system to finance housing for the middle class. The Housing Development Finance Corporation in India was started in 1977 and became successful by providing mortgages to the middle class. Today it is a diversified, full-service institution and the 3rd largest bank in India. The Mexican government chartered wholesale financier Sociedad Hipotecaria Federal who partnered with an industry of mortgage banks that sprouted up after the Tequila Crisis of 1994 to deliver mortgage products to the middle-class. Sociedad Hipotecaria Federal provides a guarantee from the Mexican government for both housing construction and housing acquisition loans (Magowan, 2008).

So who addresses housing finance for the lower income populations? Informal finance, microfinance institutions, cooperatives, credit unions, finance companies, and home improvement retailers are the predominant sources of finance for this market.

Informal finance involves relying on the support of family and friends to obtain land, capital and labor to address a household's need for housing. Informal savings groups are common in many developing regions where a group of trusted friends contribute money on a regular schedule and each member of the group gets their turn on a regular rotation to take the money collected. Labor, resources, and money are pooled together by family members to contribute to the needs of the family including land, housing supplies and rent. In addition friends and family are common sources for loans for those without access to formal finance.

Microfinance Institutions (MFI) have traditionally focused on lending short-term working capital to informal low-income workers and entrepreneurs. Most MFIs require donor support to get off the ground and some have become financially sustainable over time. Eventually many have introduced housing financial products in recognition that for many their personal dwelling is their workspace. An example of success has been Accion International which estimated in 2007 that 7 of its MFIs' housing portfolios which include home improvement and home lending were growing at 50% annually (ACCION, 2007). While microfinance institutions have been successful in reaching the lower-income population with housing finance products, most of them have been unable to achieve significant scale.

Some larger MFIs have converted into regulated institutions allowing them to both take deposits and provide lending products. This step requires improvement in governance, operations, and transparency which sets the stage to make housing finance more viable. James Magowan, Managing Director and co-founder of Housing MicroFinance, LLC (HMF), a company dedicated to developing housing markets in emerging less developed countries and Chief Investment Officer of Global Microfinance Group SA (GMG), a Swiss holding company that builds financial services for micro, small and medium enterprises in emerging markets believes MFIs are uniquely suited to address informal low-income workers. Large, regulated MFIs are becoming excellent potential channel for housing finance (2008).

In rural India, Bolivia and Peru cooperatives have been successful financial institutions of relative strength. Cooperatives collect deposits and only do business with their members. They are similar to MFIs although they have been better able to achieve substantial scale in some markets. In many cases cooperatives reach larger numbers of low-income persons than MFIs which are typically targeted specifically to the poor, and without relying on donor support. They are typically regulated and offer low-cost savings programs although the non-profit associative structure often creates variation in the quality of risk management and governance (Magowan, 2008).

Credit Unions have traditionally provided financial services to salaried workers with slightly higher incomes than those targeted by MFIs or cooperatives. They are usually regulated, accept deposits, and have similar strengths to MFIs and cooperatives. However, affiliation with cyclical industries and recovering losses, in the event of default, with borrowers who are also shareholders adds an element of risk in this institutional structure.

In large economies such as Brazil, India, Mexico and Indonesia large consumer finance companies have started offering credit in the home improvement marketplace. The business strategy of Financiera Independencia is to become the leading provider of financial services to the low income segment of Mexico's population while maintaining high levels of profitability and efficiency. In 2006 the equity investment from HSBC Overseas helped Financiera Independencia to facilitate a new product line CrediConstruye intended to finance home improvements. In 2007 they were able to provide CrediConstruye construction loans to the informal sector of the population. These loans were 40% subsidized by the government's Sociedad Hipotecaria Federal. Borrowers in this program must be low income, loans must be used for home improvements, and loans are provided in the form of vouchers which can be exchanged for construction materials (Ferguson, 2008). In general consumer finance companies rely less on the creditworthiness of borrowers and tend to have higher arrears than the other forms of housing finance for low income persons. Typically consumer finance companies stick to short-term home improvement loans and avoid longer-term housing loans (Magowan, 2008).

Both Home Supply Retailers and Home Builders have started extending credit to customers. In dynamic economies such as Brazil where sources of housing finance are limited, home builders have provided housing finance to purchasers by requiring 50% of the purchase price up-front and at the time of occupancy accepting installment payments for the remaining 50%. Manufacturers of home building supplies have also recognized the opportunity in a large segment of the population without access to credit resources. Maestro Home Center in Peru has partnered with a local bank to provide credit cards to

the informal population while the home retailer, Corona, in Colombia has started their own credit product which they market through low-income neighborhood sales representatives (Ferguson, Magowan, 2008).

Case Summaries

The following case summaries provide examples of how affordable housing solutions are being addressed in various developing markets. These examples help inform and inspire affordable housing solutions throughout the world.

Case Summary #1: The Challenge of Facilitating Affordable Housing: An Example from Nigeria

In 1991 Nigeria adopted a National Housing Policy aimed at eliminating the housing crisis. Double-digit interest rates in the 20% range along with a lack of liquidity at commercial banks making long-term loans of 20 to 25 years non-feasible has limited most Nigerians to buying land and building homes with cash. The result is a homeownership rate of less than 10% in Nigeria. According to the Housing Minister of Nigeria, the World Bank estimates Nigeria's housing deficit at 15 million units. With this level of demand and lack of supply in Africa's most populous country, both rental housing and land is very expensive.

In an attempt to address the problem the National Housing Fund (NHF) was created by law in 1992 mandating real estate developers to build housing at a price targeted as affordable via funds from NHF. A primary goal is to make the private sector the main source of housing finance. A key objective of the fund is to provide an adequate liquidity facility because inadequate funding had long served to hinder mortgage finance in the country. The concept is ideally intended to make housing finance accessible to persons further down the income ladder which is believed would have a residual impact on the overall economy. It is also intended that government intervention including direct housing construction would be abolished as it had unintentionally contributed to a heightened housing crisis in Nigeria (Oduwaye, Oduwaye, Adebamowo).

Four principal organizations given the responsibility for carrying out the affordable housing scheme are the following (Ozili, 2009):

- 1) REDAN – The Real Estate Developers Association of Nigeria (formed in 2002).
- 2) FMBN – The Federal Mortgage Bank of Nigeria (first established in 1977 and updated in 1982).
- 3) MBAN – The Mortgage Banking Association of Nigeria which serves as the umbrella for the Primary Mortgage Institutions (PMIs).
- 4) BUMPAN – The Building Material Producers Association of Nigeria (formed in 2004).

The National Housing Fund is the funding facility for the strategy. Its fundamental purposes are the following (FMBN, 2011):

- Facilitate the provision of housing at affordable prices.
- Ensure a constant supply of loans to build, buy, or improve residential houses.
- Provide incentives for the Capital Markets to invest in property development.
- Encourage the development of programs specifically for effective financing of housing development, in particular for low income workers.
- Provide policy control over the allocation of resources and funds between the housing sector and other sectors of the economy.
- Provide long-term loans to Primary Mortgage Institutions for on-lending to contributors to the National Housing Fund.

The Federal Mortgage Bank of Nigeria has charge of carrying out a number of core operations for the administration of the National Housing Fund. These duties include mortgage lending to Primary Mortgage Institutions, private real estate developers, Housing Corporations, and Housing Cooperatives.

NHF is funded by a number of contributors. The Federal Government is to make adequate contributions to the fund for the purpose of making loans for housing development in Nigeria and make

contributions in naira (₦, Nigerian currency) or foreign currency as may be deemed necessary. Commercial Banks are required to invest 10% of its loans and advances at an interest rate 1% above the interest rate payable on current bank accounts. Registered insurance companies are mandated to invest 20% of non-life funds and 40% of life funds in real estate development with not less than 50% invested in NHF through FMBN at a maximum interest rate of 4%. Nigerians who are paid employees or self-employed earning a minimum of ₦3,000 per year are required to contribute 2.5% of monthly salary to the fund. Employers are to auto-deduct these contributions monthly and the self-employed are required to remit contributions monthly as well (FMBN, 2011). This strategy has been utilized in various ways in both developed and developing countries including countries in Latin America where mandated employee pension funds are utilized for housing finance so that employees may in essence borrow against their pension fund. In the U.S. teachers and government employee pension funds have been utilized similarly as well.

As part of the affordability strategy, loans from the fund are set at rates below prevailing commercial rates. PMIs may obtain loans at a rate of 4% from FMBN and the National Housing Fund for loans made to borrowers who are contributors to the fund. The individual fund contributors are allowed to borrow at a fixed interest rate of 6% over a maximum term of 30 years. Real estate developers can access estate development loans (EDLs) at 10% interest for a maximum of 24 months. The homes built



must be 1-bedroom to 4-bedroom homes sold to contributors of the fund with a minimum target price of ₦1,000,000 and maximum price of ₦5,000,000. The “affordability test” and qualifying process for individuals wishing to obtain housing finance from a PMI include: (1) contribution

to NHF for a minimum period of 6 months, (2) salary, (3) age, (4) if employed, years left in service, (5) ownership or availability of registered land with Certificate of Occupancy to serve as security for the loan (FMBN, 2011).

Since the NHF was instituted in the early 1990's, there have been gaps rendering the program less effective than originally intended. Provision for funding the NHF by the government has reportedly been lacking. Commercial banks and insurance companies have refused to contribute to the fund because the interest rate paid to them on the funds they would contribute is less than the rate they have to pay for the funds. Other organizations have failed to contribute to the fund on the premise that they have their own in-house housing program. FMBN has failed to effectively serve as a wholesale lending facility due to the distractions of serving as sole collector, administrator and Manager of the fund. Restructuring FMBN and unbundling functional components of the process to be delegated to other agencies has been suggested to improve operational efficiency. Severe inefficiencies and scarce signs of progress have destroyed hopeful expectations of the citizenry. A recommendation was made that NHF be converted into a Trust Fund with a Board of Trustees representing all stakeholders to improve transparency and restore public confidence in the fund. Other complaints included a lack of serious initiative taken by the Federal government to address the issue of affordable housing; weakness in the Land Use Act which has stifled development, secure tenure, availability and affordability of land; delays in obtaining approval or denial of loan requests and disbursement; lack of information regarding the benefits for contributors to the fund; poor data management on the housing sector to facilitate planning; and other various complaints (Ozili, 2009).

Under new leadership of Alhaji Adedamola Atta, Chairman of the Federal Mortgage Bank of Nigeria since 2009, many of the complaints and weaknesses of the housing program are reportedly being addressed. The Chairman reports that the Federal Government has set aside billions of naira for the development of affordable housing. Nigerian states which had resisted participating in the NHF housing scheme have been persuaded to rejoin and participate. In Kogi State a funding facility was provided by

FMBN to build housing on a piece of land already owned by the state with the state agreeing to provide infrastructure for the development. A rebranding campaign was launched aimed at repositioning FMBN as the foremost secondary mortgage and capital market in the country. The Board approved increasing the maximum loan amount from ₦5 million to ₦15 million in recognition of the fact that ₦5 million was inadequate to purchase or build a home as a result of inflation in recent years. Other financial institutions including pension fund administrators, insurance companies, microfinance banks and universal banks were given license to originate housing finance loans and tap into the fund providing relief to present constraints. FMBN completed the difficult task of cleaning house internally by removing 150 employees to make certain the organization is staffed with person with a mindset to carry out the reforms. The bank upgraded its IT, software, automation and other related systems to better streamline processes, capture and manage data. Additionally a number of employees were sent to train with some of the best institutions in the world and determine how they had succeeded in developing high rates of homeownership. Through this process it became clear to leadership that pumping government money alone into the housing system is ineffective. A new approach surfaced for initiating public-private collaboration and inducing linkages between the housing finance system and international capital markets to provide adequate liquidity (Guardian, 2010).

The outcome of the improvements made to the structure and system of FMBN along with the knowledge absorbed by training with other institutions, has inspired a new focus on finding investors and developing securities attractive to the international marketplace. A proposal with a number of requests was submitted to the government for approval along these lines. Recently HSBC conducted their own due diligence, examined the systems, technology, management and operations of FMBN and approved a \$1.5 billion investment. The China National Machinery Industry Corporation expressed its interest in partnering with the bank and the Federal Capital Territory Administration to deliver one million housing units in phases with the first 100,000 units as affordable units in a new FCT. The Korean Land and Housing Corporation, a developer and financier, has also expressed interest in projects and investments of

mass housing delivery, development of new cities in various regions, and infrastructure development in Nigeria. At this point some of these investments, including the investment from HSBC, cannot move forward until the government approves aspects of the aforementioned proposal (Guardian, 2010).

Challenges identified by Mr. Atta include the slow process of obtaining approval for bills in Nigeria's democratic process; however, the Chairman is encouraged by cooperation from the House and Senate Committees on Housing. Once the proposals currently under consideration are passed, he is confident mortgage finance in Nigeria will be revolutionized. Another concern of the Chairman is the corruption of some Nigerian politicians. While many reforms and beneficial laws have been passed, some politicians with careers built on corruption remain in charge of enforcing such laws and reforms (Guardian, 2010).

A few observations from the case of affordable housing finance in Nigeria include:

- Putting together a plan of action is important but execution is everything.
- Even if a plan is not well-executed it's possible that effective new leadership can breathe life into the plan.
- Accountability, enforcement, and data collection are key factors for success.
- Recognition that both public and private sector investment play a key role in the success of affordable housing and capitalization.
- A lack of transparency, inaction, and poor execution creates public resentment and lack of trust.
- Democratic governments can unfortunately be difficult and slow in passing legislation necessary to move the process along in comparison say to authoritarian governments.
- Where corruption is prevalent progress is stunted.
- Incorporating the successes of other institutions and markets can inform and guide the planning process.

- Incorporating stakeholders in the planning process could be a better way of attaining success (i.e. working together with commercial banks and insurance companies to develop a plan that is feasible and favorable to all parties).

Nigeria's attempt at creating affordable housing finance has yet to be fully realized; however, effective capitalization, productive collaboration, transparency at all levels, and better execution may lead to a more successful outcome.

Case Summary #2: Successful Comprehensive Affordable Housing: An Example from El Salvador

The evolution of El Salvador's mortgage banking system provides evidence of how collaboration between public and private, for-profit and non-profit entities can be successful. After a Civil War and again following two serious earthquakes prior to 2001, donor funds flooded El Salvador to assist in the rebuilding process. Much of these funds were directed toward housing finance and construction leading to an expansion of innovative housing credit products.

In the 1990's USAID funding for microfinance projects encouraged a shift in the lending industry from subsidized interest rates which required ongoing donor funding to commercially sustainable rates. Significant technical assistance from the donor community aided in upgrading operational, financial and regulatory management creating stronger institutions, attracting attention to the microfinance community, and sparked an increase in loan capital. A large number of banks, for-profit finance companies, microfinance institutions, cooperatives, credit unions, private sector credit for computers and appliances, housing credit by land developers, and emergency money lenders became active in the market. These factors along with the country's previous shift to a dollarized economy created a very competitive financial services market (Hall, 2007).

In addition El Salvador established two credit bureaus: one for regulated financial institutions which is partly owned by Equifax and one created for microfinance institutions originally funded by USAID. Some institutions are members of both and 78% of the population is covered by these private

credit bureaus. Property valuations are required by regulated institutions and many non-regulated institutions desiring to maintain professionalism in the industry use certified appraisers. Architects certified in property valuation by the Central Bank have contributed to the standardization of housing valuation and finance. In 1994 the El Salvadoran government, USAID and World Bank contributed to Centro Nacional de Registros (CNR) which established a reasonably functional land registry system and required the filing of property titles allowing city governments to assess annual property taxes. Establishing an effective title registry is no easy task and title problems still exist today. Post-war title conflicts and courts that may not recognize indigenous rights contribute to the challenges. While the land registry system and land laws operate relatively well, the poor frequently lack information and resources to pursue legal remedies to obtain adequate title and registration. These types of disparities often hamper access to housing and housing finance for the poor.

The El Salvadoran Government created three programs to promote affordable housing. The first called Liberty and Progress Institute is designed to assist low-income persons to acquire legal title to land. The second is FSV, a social housing fund, created to provide loans directly to low-income families in the informal sector at subsidized rates. Lastly is FONVAIPO, a national public housing fund. This fund provides loans and subsidies which have enabled Microfinance Institutions to offer affordable mortgage loans to qualified recipients. Qualified recipients are assessed based upon socio-economic factors which include a maximum income threshold for families of \$700 per month and a maximum subsidy per household of \$2,000.

The private sector also plays an enormous role in facilitating affordable housing finance in El Salvador. Private developers have been active in purchasing large tracts of land, subdividing and either selling the parcels or building homes and selling them on credit. Argoz is one land developer that has sold over 300,000 plots in 23 years. The common perception is that purchasers prefer to buy the land and build homes progressively themselves.

Two housing finance institutions have emerged as major players in providing housing finance to the public including low-income households. ACCOVI is a regulated cooperative with members and an average loan amount of \$5,500. This savings and loan cooperative was started in 1965 by teachers and now serves a broad range of clients. In 2006 it had 125 employees, 8 branches, and 6,000 members for a savings portfolio of \$25 million and lending portfolio of \$32 million. Demanding regulatory compliance and subsidized technical assistance aided in improving its portfolio and customer service. In an attempt to reduce transaction costs, ACCOVI contracts with an independent appraiser and bundles notary, valuation and recording fees into the total loan amount.

Mortgage loans with registered land titles account for 20%-30% of its clients and make up 42% of its portfolio or \$15 million. Mortgage loans must be a minimum of \$500 and maximum of \$250,000 and can be used for lot purchase, installation of basic services, construction or improvements. The maximum term is 25 years at an interest rate of 10%-16% although low-income borrowers may qualify to receive government subsidy. The Equifax credit bureau is used in the qualifying process. Central Bank regulations require the land or house to serve as collateral for these loans. Mortgage loans tend to be the best performers in ACCOVI's loan portfolio with only 10 loans foreclosed upon in 2 years.

Consumer loans ranging from a minimum of \$1,000 up to a maximum of \$250,000 are the largest segment of ACCOVI's portfolio at 44% or \$16 million. For clients without registered title but clear rights to land, consumer loans can be used for housing needs. Consumer loans require a salaried guarantor, carry a 10%-16% interest rate and have a maximum term of 5 years.

Microenterprise loans are a third type of housing available for finance which can be partially used for housing improvements under the concept that the home may also serve as the borrower's place of business or serve as a workshop. Minimum loan amount is \$57 to a maximum of \$6,000 for a maximum term of 5 years. Interest rates on these loans are 30% and require either a salaried guarantor or a fixed asset such as an appliance or machinery as collateral.

Criteria used to underwrite the loans include willingness to pay, ability to pay, quality of the guarantee, and repayment capacity of the borrower. Salaries, self-employment income, and remittances qualify as income although local sources of income are preferred. In fact a small percentage of loans are paid through remittances. Although salaries serve as a guarantee for consumer and microenterprise loans, in cases of default the lender cannot automatically seize salaries.

The second major housing finance institute is Integral, an unregulated for-profit company with shareholders and average loan size of \$1,200. It originally began as a housing credit program of Salvadoran NGO FUSAI. As of 2006 shareholders included FUSAI (60%), Duenes-Herrera Foundation (20%) and microenterprise firm, Accion International (20%). Its portfolio includes \$32 million in consumer, housing and microenterprise loans with 200 employees, 14 branches, and 22,000 active loans. Housing loans which account for 30%-35% of its \$32 million in housing related finance range from a minimum of \$500 to a maximum of \$50,000; with a maximum term of 25 years and carry an interest rate of 16%. Borrowers that cannot afford a mortgage or have inadequate title may qualify for community housing loans associated with FUSAI projects supported by donor funds. FUSAI constructs infrastructure and provides water and sewer connections. A family is given a plot of land to build a home with a loan from Integral coupled with a subsidy from a donor for the construction (Hall, 2007).

Several successes are observed in the case of mortgage finance which is accessible even to low-income and poor households in El Salvador.

- Consistent funding (in this case donor funding) support the development of a well-capitalized financial system with adequate liquidity.
- Technical support aided in creating a solid framework and standard of professionalism in both regulated and non-regulated financial institutions.
- Credit bureaus, title registry, property valuations have helped to create standardized lending and underwriting procedures.

- Competition between lenders for available capital benefited borrowers by creating diverse financial products to meet the needs of the market.
- Mission driven for-profit and non-profit organizations took advantage of available capital using it to create innovative housing financial products and housing resources for the poor.
- The Salvadoran government took action to create programs and funds that included subsidies and legal support to assist low-income families and the informal sector.
- Private sector developers participated by providing land and housing in a pragmatic way to meet the needs and wants of the purchasers at an affordable price.
- A functioning title registry helped create collateralized mortgage finance in the form of land or homes allowing access to finance for even the poor.
- Housing finance providers have created innovative and flexible housing finance products for construction, purchase, infrastructure, progressive housing and home improvements that fall within the parameters of the regulatory system.
- Housing finance institutions have identified challenges for the poor and taken steps to lower transaction costs by providing appraisals and bundling fees for notary, valuation and recording into the loan amount.
- Underwriting criteria is concerned with credit, collateral or guarantees but prudently weighs heavily on the borrower's capacity to repay.
- Various stakeholders including government, donors, the private sector, real estate developers, mission driven institutions, NGOs and local financing institutions each contributed to the overall success of fashioning and facilitating accessible affordable housing finance.

Although El Salvador's experience is unique as a result of its history which precipitated the flow of significant donor capital, it serves as an example of how appropriate framework, liquidity, competition, and contributions from various parties can effectively create affordable housing finance solutions.

Case Summary #3: Private Sector Innovations in Affordable Housing: “Patrimonio Hoy” in Latin America

Cemex is a leader in the global building materials industry with core business in cement, aggregates, and ready mix concrete. As a socially responsible private sector company in business for more than 100 years, it designed one of the most successful affordable housing projects to date. In recognition of the fact that over 40% of its cement sales in Mexico were purchased by low income Mexican consumers, Cemex set out to better understand this segment’s behavior by launching a year-long research project in 1998 directly with a community in Guadalajara, Mexico. Through this research it discovered that its consumers built their own homes progressively as they were able resulting in an intermittent construction process that was inefficient and slow taking many years to complete if completed at all. In addition there was a great deal of costly waste as excess construction materials were often ruined or weakened due to a lack of secure storage. Inability to obtain resources, lack of knowledge and access to technical advice, further contributed to a very slow building process and poor quality construction (Cemex, 2011).

In 2000 Cemex introduced Patrimonio Hoy (‘assets now’) which combined financing, construction materials, and technical assistance to serve the progressive housing process of low-income households. Construction materials are packaged according to a sequential construction process adequate to build according to the customer’s need. Financing for the materials is provided via microfinance. Once the customer has saved 20% of the total construction cost in an account with the microfinance institution, the customer can obtain credit for the remaining 80%. A weekly charge of 180 pesos (approximately USD \$16.50) is assessed per family and covers materials, home delivery of material packages, and materials storage for up to one year. This also covers technical services from architects and engineers to assist in design, planning and construction of the home. Fixed pricing is guaranteed for up to 70 weeks.

The success of the Cemex' Patrimonio Hoy program has impacted Mexican communities in the following ways:

- Homes or additions are built three times faster at one-third the average cost to build a home in Mexico.
- Access to credit lending for low-income individuals.
- The market value of homes built through participation in Patrimonio Hoy is approximately 20% higher due to better quality and functionality of the structures.
- The program has induced job creation for local masons and community based promoters.
- In particular, opportunities for meaningful work are provided to women with 95% of the community promoters being women and more than half with no prior work experience. The women are trained to market the program and help families collaborate to borrow and repay the construction loans.
- Twenty-nine percent (29%) of participants use their homes or extra rooms built through participation in the program to build a business.

Lending of \$94 million (USD) had been granted to 205,000 Mexican families by the end of May 2008 via Patrimonio Hoy with a 99% on-time payment rate. These loans facilitated the construction of 105,000 10 m² rooms. The success and profitability of Patrimonio Hoy provided the impetus to implement the program through 100 centers with 85 located in Mexico and 15 located in Colombia, Venezuela, Nicaragua, Costa Rica, and the Dominican Republic. Out of the 100 centers, 93 are self-sustaining operations. Patrimonio Hoy has assisted 1.3 million people in Latin America with affordable housing solutions resulting in 265,000 homes built (Cemex, 2011).

The success of Patrimonio Hoy has inspired Cemex to partner with local governments and neighborhood groups to develop community infrastructure including roads, sidewalks, parks, schools, hospitals and public spaces. Microloans are made available to neighborhood groups which are combined

with government funding. As a result infrastructure projects are typically completed in 70 weeks versus 10 years which is more typical for low income neighborhoods.

In 2006 Patrimonio Hoy was recognized with the World Business Award for its support of the United Nations Millennium Development Goals. The award was sponsored by the International Chamber of Commerce, Prince of Wales International Business Leader's Forum, and the United Nations Development Program. Trust for the Americas honored it with the Corporate Citizen of the Americas Award in 2007. In 2009 it was the recipient of the United Nations HABITAT Business Award in the category of accessible housing solutions (Cemex, 2011).

Case Summary #4: Casa Grande & Moladi: Innovations in Construction Materials & Technology

Jim Paul of Casa Grande, LLC wanted to develop a concrete substitute for construction because concrete has a tendency to erode in acidic conditions. During this time he was traveling through South America and noticed the poor housing conditions in poor neighborhoods. Recognizing the demand for low-cost housing inspired him to consider how the product he set out to create could be used to meet this demand. The result was Grancrete ® developed in partnership with scientists at Argonne National Laboratory. It is a spray-on structural cement-like material made of tough ceramic nearly twice as strong as concrete; designed for rapid construction as an option in low-cost housing production. In 2004 *R&D Magazine* recognized it with the R&D 100 award describing it as “one of the most technologically significant new products.”

Together Dr. Argun Wagh of Argonne National and Jim Paul of Casa Grande collaborated to create Grancrete ®. In 1996 scientists at Argonne National Laboratory which is operated by the University of Chicago on behalf of the U.S. Department of Energy designed Ceramicrete, a material used to encase nuclear waste. This product was the basis from which Dr. Wagh and Mr. Paul created Grancrete ®. Experimentation has proven it to be stronger than concrete, fire-resistant, and able to withstand temperatures from 8 to 110 degrees making it useful in a variety of geographic locations. It is

sprayed onto Styrofoam walls providing an excellent insulator and dries in 2 to 4 hours. Dr. Wagh suggests the product can even be sprayed on woven palm leaves which are often used to create walls in the dwellings of poor people in his native India. The components of Grancrete ® are environmentally friendly and locally available composed of 50% sand or sandy soil, 25% ash, and 25% binding material made of magnesium oxide and potassium phosphate (ANL, 2005).

Mr. Paul suggests only two days of training are required to learn to control and calibrate the equipment used to spray the material. Casa Grande typically uses a 5-person team to begin building in the morning with a finished home by evening. It is suggested that training and materials are so minimal that two local workers could build a home within two days. Dr. Wagh has been influential in bringing the product to India to produce housing for the poor which can better withstand the weather patterns including monsoon rains and strong winds. The research team is continuing to test for earthquake and hurricane resistance to make the product available throughout the world.



Casa Grande estimates a home constructed using Grancrete ® costs approximately \$6,000 (USD) for labor and materials. It is estimated that an 800 SF home could be constructed for \$10,000 (USD). According to Casa Grande, typical apartments in Bombay, India are 400 SF. It is hoped that international organizations will subsidize mass scale production globally using the product (ANL, 2005).

Grancrete may not be completely perfected to date. However, the product is continuing to be developed and improved offering hope that it may provide an option for economic housing in emerging countries.

Moladi, a small family-run business in South Africa, has focused on innovating building techniques that can assist in addressing sustainable housing construction for the poor throughout the world. Its strategy attempts to address common constraints in the developing world including a lack of resources, funds, skills, and environmental challenges. Hennie Botes is the founder and social entrepreneur with an ambition to bring affordable housing to as many people as possible throughout the world (Coetzer, 2009).

The technology created by Moladi uses a system of casting moulds of plastic panels providing the formwork for the structure. The plastic moulds can be used repeatedly up to 50 times. A stoneless concrete of aerated mortar is poured into the cavities of the mould quickly and easily for a simplified and less costly building process. A specially formulated chemical now known as MoladiCHEM is an essential ingredient of the mortar mix. When mixed with the concrete it aerates the wall, ensures that it is waterproof, and has thermal properties considered to be better than block structures. Once the mortar has dried, the moulds are removed and reused for cost-effectiveness.

Moladi's technology is designed to eliminate waste and time with a four-step process. The four steps are: (1) erecting the plastic formwork, (2) reinforcement, (3) pouring the mortar into the casting, (4) removing the formwork panels. The ability to reuse the freestanding panels makes the process more efficient and cost-effective. During the reinforcement step, the wall cavities can be outfitted with water pipes, electrical conduit and blockouts for the doors and windows. The simplicity of the design means the mortar can be poured with local, unskilled labor or pumps. The mortar typically requires 12 hours to dry at which time the panels can be removed and erected at the next site. Walls are smooth and do not require

any plastering. The home is ready to be fitted with a roof, basic sanitation equipment, doors, and windows.

The technology has been certified by South African Bureau of Standards (SABS) by passing robust testing including tests for water penetration, soft body impact, and chisel impact. In addition the walls have the advantage of being able to withstand earthquakes. Moladi has been the recipient of awards including the SABS Design for Development in 1997 and the Housing Innovation Award presented in 2006 by National Homebuilders Registration Council and South Africa's main banking institution, ABSA Bank.

What is even more impressive is that the technology is not limited by building size or type. The technology has been utilized to build higher density projects, multi-story residential buildings, schools, offices and clinics. In 2006 Moladi technology was used to build 100 multi-story units as part of a 1000-unit project developed in Mexico.

The basic materials including the formwork panels and essential components of the mould are packaged in kits. Otherwise any materials that can be sourced directly at the site such as doors, windows, tools, baths, mortar aggregate, steel, and labor is preferred to preserve the economics of the project, although Moladi can ship other materials as needed. Moladi employees train the laborers, contractors, or developers in the use of the technology. Once trained, many of these customers become distributors of the technology in their local area through an agreement similar to a licensee or agent.



Moladi's technology has been utilized in 16 developing countries around the world including a large project in Ghana to develop 100 housing units and additional contracts to develop housing with Karle Group, a property developer in India. Moladi's agent in Ghana recently won a contract to build 25,000 low-cost housing units in Sierra Leone. Haiti is benefiting as a result of Moladi technology with 10,000 homes slated to be built in that country as of 2010. Ngabolo Projects, a local South African construction company was awarded a contract to develop 1,000 affordable dwelling units in the South African township of Diepsloot, a community particularly riddled with issues of poverty. This project was started in February 2010 using the Moladi technology.

Because Moladi's innovative approach can be perceived as a threat to the traditional building industry, the company typically has greater success in developing relationships with property developers than construction companies. For the Moladi technology to be competitive, minimum threshold of 50

units is typically required making it a straightforward building method for mass housing. Property developers who share in both the risks and the profits by selling the homes to end-users, governments, or government-subsidized housing schemes have served as excellent partners. Since the 1990's the founder, Henry Botes, has established partnerships with developers in Central and South America expanding his reach throughout Africa and India during the 2000's. Channels of promotion and distribution have been established in Angola, Botswana, Ghana, Kenya, Mozambique, Namibia, Nigeria, Sudan and Zambia. The technology has also been used in Panama, Sierra Leone and Tanzania. Businesses from Nepal, the Philippines and Iraq have also shown interest in the Moladi technology.

Moladi claims the technique can reach up to 35% cost savings as compared to the conventional building method. A 50-unit project with units sized at 40 m² (430 sf) is estimated to cost \$6,037 (USD, 2009) per unit. The cost, however, would depend upon other factors including local labor expense, soil conditions, available local resources, project size, etc (Coetzer, 2009).

Case Summary #5: Global Housing Foundation Mobilizes Capital for Affordable Housing

Global Housing Foundation (GHF) offers an example of how mission-minded for-profit and non-profit partnerships can put together a strategic plan that mobilizes capital for affordable housing investment. GHF is an independent U.S. and European based non-profit organization leveraging the expertise and resources of the private real estate community to build new affordable housing for the world's working poor.

The basic strategy proposed by GHF involves negotiating with the local government or other benefactor to allocate a plot of land for the prospective homeowner. An approved developer obtains construction financing from an approved lender to build houses according to approved design specifications. Qualified prospective homeowners obtain mortgage financing from the approved lender and buy the home and land from the developer which allows the lender to repay the construction loan and retain a predetermined profit. After a 12-month seasoning period the local lender sells eligible mortgage

loans to a Merrill Lynch facility and receives a subordinated interest of approximately 20% of the pool balance. The lender continues to service the mortgage loan and receive a servicing fee.

Prior to the 2008 meltdown in U.S. mortgage markets, GHF was successful in negotiating a funding facility with Merrill Lynch. The capital structure included a credit enhancement with local banks assuming credit default risk by requiring the local bank to hold the mortgage loan for 12 months and retain any loans that did not meet eligibility criteria at the end of the seasoning period. These approved banks would also absorb the first 20% of any portfolio fund losses. A cash collateral account funded by UN-Habitat or an affiliate representing 20% of portfolio funds would be deposited in a segregated trust account and managed by Merrill Lynch. This allowed the interest to remain at the lowest possible rate for low income borrowers and would cover losses if they were to exceed the initial 20% covered by the local banks. Merrill Lynch and the capital markets would fund the loan at 80% but limit its risk to 60% of the portfolio as a result of the cash collateral account (GHF, 2007).

Global Housing Foundation proposed a great idea for attacking the issue of affordable housing; however, it was met with poor timing. A small number of homes have been produced from this strategy to date. The collapse of the U.S. mortgage markets in 2008 leading to the global financial crisis which nearly sucked all liquidity out of the financial markets has hindered GHF's proposal from moving forward. Nonetheless the idea continues to have merit and should be reevaluated to determine if the plan or aspects of it might be useful going forward.

Strategic Actions to Stimulate Affordable Housing in Emerging Countries

Earlier we identified the strategic actions that must be taken expeditiously to catalyze affordable housing finance along with a number of challenges to be overcome in the process. We now turn to these strategic actions and challenges, identifying possible solutions adaptable within the context of individual countries and regions.

Strategic Action #1: Development of a Legal and Regulatory Framework

Developing an adequate legal and regulatory structure to support affordable housing development and finance is a goal that must be given high priority to stimulate affordable housing. Three main priorities should be developing a system of land registration which includes recordation of title and liens, creating a national credit database, and developing or strengthening foreclosure laws and procedures. A key contributor to El Salvador's success in facilitating affordable housing finance was the framework created by basic fundamentals like the establishment of credit bureaus, creating a well-functioning land title registry, technical support and training to improve the professionalism of financial institutions which increased operational and financial efficiencies and aided in development of a strong regulatory environment.

Land Registration

A lack of legal and secure title serves as a barrier inhibiting the growth of formal housing finance. It creates three major challenges. One is that persons living on land in which they do not have some source of verification that they hold title or adequate tenure security are hesitant to make any significant investment in improving their existing housing to better standards. The fear of being bulldozed or forcibly relocated which has occurred in a number of cases where governments have attempted to deal with slums is the reason. The second challenge is that some finance institutions may choose not to finance housing without adequate title or tenure security. Tenure security refers to enforceable claims on land which include national, village or tribal rules that are supported by a national regulatory framework. Whether to finance with or without adequate title is a question of risk which affects the pricing of the loan. In any case it's possible the land is inadequate or worthless collateral to the lender resulting in either an uncollateralized loan or the need to obtain another source of collateral. A third challenge is that investors are typically unwilling to endure the risks associated with inadequate title security which eliminates the most significant source of funding for affordable housing projects and finance.

Mandating and implementing a well-functioning title registration system is a must. El Salvador serves as an example that establishing a well-designed land title registry improves access to land which improves the opportunity to gain mortgage finance even for the poor. The ability to determine who owns land and any liens serve to protect ownership rights and facilitate the enforcement of title, lending, development, and investment.

National Credit Bureau

A lack of private and public credit bureaus in most developing countries complicates the credit underwriting process. The absence of a credit database in some regions of the world means underwriters must look for alternative means of assessing credit risk. They may require a salary guarantee from the employer, a co-guarantor, pledge of pension or retirement funds, or significant equity investment for self-employed business owners. The problem is, this eliminates a massive proportion of the market for housing finance products. The establishment of credit bureaus would assist the lender in making an appropriate and informed assessment of the quality of the borrower and contribute immensely to the transparency and standardization of underwriting procedures.

The World Bank has developed a scorecard via its Credit Depth of Information Index and data on the percentage of various populations covered by public and private credit bureaus. The World Bank Credit depth of information index measures rules affecting the scope, accessibility, and quality of credit information available through public or private credit registries. The index ranges from 0 to 6, with higher values indicating the availability of more credit information, from either a public registry or a private bureau, to facilitate lending decisions. In 2009 the index indicated a 2.9 score worldwide with 21.8% of the adult population covered by public registry and 6.6% of adults covered by private credit bureaus. Ghana, Democratic Republic of the Congo, and Nigeria each score a 0 on the index, Bangladesh a 2, the Philippines a 3, Vietnam, Pakistan and Kenya each scoring a 4 as of 2009. Those countries that have shown the greatest promise in recent years including the BRIC countries (Brazil, Russia, India, China)

and others such as Mexico, South Africa, Peru, Turkey and Egypt score higher on this index with scores ranging from 4 to 6 (World Bank, 2010). With improvements in available credit information, underwriting would improve, and banks and businesses in emerging markets would be in a better position to attract capital.

Foreclosure Laws and Procedures

The risk that a borrower will fail to make loan payments as a result of either inability or unwillingness to pay is a major concern to lenders. Aziz Adeniran, a banker in Nigeria, suggests that this is a primary concern for lenders and mortgage banks in Nigeria. According to Mr. Adeniran, some borrowers purposely take a loan with the intent of defaulting. In some instances the defaulted borrower may have relationships with influential people in the government who can thwart the lender's attempt to collect. The foreclosure process in a number of developing countries is terribly long and arduous and in the end not very beneficial to the lender. Issues such as lack of sufficient title, progressive built homes lacking significant progress to be of much value, and a weak resale market often make foreclosure complex for the lender. Foreclosure laws must appropriately enforce payment to the lender without being an unnecessarily overwhelming process and also protect the borrower from unjust and unscrupulous practices by the lender. Strengthening and improving foreclosure laws and enforcement is a priority in developing an appropriate legal and regulatory structure.

The strength of legal rights index is a scoring provided by the World Bank's Doing Business Project. It measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. The index ranges from 0 to 10, with higher scores indicating that these laws are better designed to expand access to credit. Kenya's legal rights index score is 10, South Africa 9, Vietnam 8, Nigeria 8, Ghana 7, Pakistan 6, China 6, Mexico 5, Brazil 3, and Egypt 3 (World Bank, 2010). Looking at how other countries have improved these laws can be informative in developing

an appropriate legal and regulatory framework. The legal system and courts must also be empowered and held accountable for enforcing and upholding these laws.

Prioritizing and seeking out technical support to assess the current situation and recommend solutions that will enhance accountability, ensure appropriate regulation, improve operational and financial efficiency will go a long ways toward developing a high degree of professionalism and a legal and regulatory framework that supports affordable housing development and helps attract investment.

Strategic Action #2: Government Initiatives

A number of governments offer examples of successful initiatives and public policy aimed at creating appropriate programs and subsidies which combined with collaborative efforts of private organizations can facilitate housing finance for the low-income. El Salvador's interest rate subsidies and legal support to low-income households for obtaining title to property (Case Summary #2) is an example of effective government initiatives. MiBanco of Peru is an example of a microfinance institution which was originally started by an NGO, donor funded, with a strong social mission focused on the poor and low income populations that was able to convert to a commercial bank as a result of government policies that improved economic stability. In 2000 MiBanco introduced an innovative housing loan called MiCasa (Ferguson, 2008). Today MiBanco continues to be an active force in Peru's affordable housing market. Various housing subsidy strategies have been utilized effectively in a number of countries such as Poland's housing investment subsidy, Germany's public aid granted to institutions which build accommodation for low-income populations, Belgium's home improvement grants, Spain's concessionary interest rate for home loans, the United Kingdom's housing benefits, in France the zero percent loan, Finland's household housing aid, the United States' Section 8 rental housing voucher, Kenya's tax credits, and Sweden's block grants for neighborhood improvement just to name a few (Kolawale, 2011). These types of solutions can be studied and adapted to meet the need of various societies throughout the world.

Governments must commit to actively participate in enabling affordable housing through partnerships, legislation, funding mechanisms, improving the economic stability of the nation and other methods to create an attractive environment for developers, investors, and lenders to create affordable housing solutions. Infrastructure development is a primary way governments should be involved in facilitating affordable housing. Providing subsidies for the poor and low-income to obtain land, homes or rental housing at an affordable price is a possible method. Another is to offer subsidies or tax incentives to property developers to create affordable housing for sale or rent. Land banking that offers low-cost land to developers or low-income persons could offer an alternative government initiative. Cost-effective joint ventures similar to Cemex' partnership with neighborhoods and local government which provided local materials and community loans matched by government funding for the creation of infrastructure in Mexican neighborhoods (Case Summary #3) is an example of successful government initiatives. Incentivizing private sector innovations in housing finance, materials, and technologies that will reduce the cost of affordable housing is another approach governments might take to stimulate affordable housing solutions.

Strategic Action #3: Low Cost Housing Development

Housing can be made more economical with the production of construction materials and technologies that are durable and easy to construct for both progressive building and mass construction. Grancrete ®, an innovative construction material, and Moladi, a South African company which has created an innovative simplified construction technology method, provide two examples relevant to the case for affordable housing solutions (Case Summary #4). Property Developers providing mass housing should be strongly encouraged or incentivized to use cost-saving technologies for affordable housing. Subsidies or tax credits could also be used to stimulate the use of cost-saving technologies or materials for individual households building a home. Bundling of construction materials as Cemex has done (Case Summary #3) should also be incentivized for the progressive building clientele. In addition the use of local materials and labor to complete affordable housing projects is another way of minimizing costs.

Finally, construction companies, home improvement retailers, and building material suppliers should take up the challenge of social responsibility by investing in research and development to come up with quality, low cost construction materials and technologies designed for both mass housing construction and progressive housing production.

Strategic Action #4: Development of Infrastructure

A lack of infrastructure for the purpose of basic services such as clean water, sewer, and power are a hindrance to adequate and affordable housing. Relatively poor countries as measured by gross national income per capita and purchasing power parity will be the recipients of the bulk of the growth in world population. Research indicates new households in developing nations will earn low and moderate incomes placing further stress on available local resources including infrastructure such as water and sanitation systems which are an important component in the overall adequacy of housing. The most basic of infrastructure resources such as improved sanitation facilities and access to clean water currently fall short of meeting the demand of existing populations. As populations continue to increase the problem is further exacerbated unless addressed effectively.

As of 2008 World Bank estimated 76% of the World urban population had access to improved sanitation facilities. Regions of the world with the weakest numbers include: 43% of Sub Saharan Africa, 57% of South Asia, 64% of East Asia and the Pacific, 86% of Latin America and the Caribbean, and 89% of the Arab World. World Bank defines access to improved sanitation facilities in their report as the percentage of the population with at least adequate access to excreta disposal facilities that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained (World Bank, 2010).



Another report disseminated by World Bank in 2008 estimates the percentage of world populations with access to an improved water source. Access to an improved water source refers to the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, and rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 liters a person a day from a source within one kilometer of the dwelling (World Bank, 2010). While greater than 95% of the world's urban population has access to an improved water source, greater than 15% of the urban population that is low-income or living in sub-Saharan Africa does not have access to an improved water source. The World Bank reports that only 77.9% of rural populations globally have access to an improved water source as of 2008.

Infrastructure development is a necessary component to adequate affordable housing for both developers and individual households. Patrimonio Hoy and Cemex work together with neighborhoods and local governments to provide infrastructure loans and access to government funding for infrastructure to communities. Salvadoran NGO FUSAI, Integral and a donor foundation have successfully

collaborated to construct infrastructure while providing housing finance and subsidies for home construction (Hall, 2007). These types of solutions structured to fit the context of the location can be effective methods for developing adequate infrastructure that catalyzes affordable housing development. Investors and governments may work together in mutually beneficial ways in support of the effort by building infrastructure or creating local utility companies. As mentioned earlier (Case Summary #1) the Korean Land and Housing Corporation is interested in working with Nigeria to develop new cities and infrastructure projects (Guardian, 2010). Governments can effectively stimulate housing development by providing infrastructure and making mass housing production an attractive proposition to real estate developers.

Strategic Action #5: Mobilization of Funds

One of the greatest stumbling blocks to the finance and development of adequate affordable housing is aggregating financial resources to facilitate lending to both developers and local households. Despite consistently strong demand, the housing markets in low and middle income countries remain handicapped and a long ways from capitalizing on the unique opportunity created by the overwhelming demand for adequate and affordable housing. Funneling available capital to the markets with the greatest deprivation of adequate housing is a challenge. Limited capital resources, real and perceived risks, and the need for sources of liquidity restrict housing finance institutions. Developing both formal systems and investment strategies that will enable housing demand to access sufficient capital and resources is critical to the feasibility of financing and developing affordable housing in emerging markets.

Sovereign wealth funds (SWF) present a specific source of tremendous potential capital for affordable housing. These pools of money accumulated as a result of national budget and trade surpluses, revenues from exports of products and natural resources are traditionally reserved for investments that will benefit the economy and citizens of a particular country. The capital in sovereign wealth funds is incredibly substantial. For example, the UAE which has significant wealth as a result of oil exports uses

its sovereign wealth fund as a way of diversifying itself. One of the UAE funds, Abu Dhabi Investment Authority, had an estimated \$627 billion in assets. As of November 2010 the Middle East and Asia were estimated to hold 75% of all sovereign wealth fund assets with Europe holding 17%. As of March 2011 SWFs are estimated to be worth \$4.26 billion (SWF Institute, 2010). Many emerging countries have abundant natural resources that are attractive to developed nations. Using these natural resources to attract SWFs in exchange for investment or contribution to affordable housing offers an avenue for mobilizing financial resources.

The Africa Development Bank which is tasked to mobilize resources for Africa along with Institutional Investors held their first Africa Sovereign Funds Roundtable in March 2011 recognized that sovereign wealth funds are a major source of investment capital for social and economic development projects (AfDB, 2011). SWFs create a way of taking surplus funds and directing them to more productive uses such as affordable housing where resources are lacking. The capital provided by these funds help create a more economically stable environment which helps support affordable housing finance. These funds are actively looking for profitable investment opportunities; are motivated to put the capital to productive use to grow their wealth and typically held accountable by their citizens for making good investment decisions (Financial Times, 2010). Developing these relationships, offering profitable investment opportunities, and structuring effective partnerships could have huge impacts on the provision of adequate affordable housing, infrastructure, and financial products

A number of institutional investors are looking for socially responsible alternative investments. Based on my research, there's a sense that European investors tend to have a greater global social consciousness than their U.S. counterparts. From 1997 to 2001 socially responsible investment (SRI) assets grew to \$354 billion, a 10-fold increase. The U.K. also passed a law in 2000 which did not mandate but certainly encouraged pension funds to invest in social, ethical and environmental investments. Similar laws were under consideration in Japan, Australia, Germany and France (IFC, 2003). According to Social Investment Forum (SIF), community investing is the fastest growing segment

of socially responsible investing (2011). Affordable housing is high on this list. Targeting pension funds for affordable housing investment, especially in Europe where socially responsible investment is prioritized, could be an avenue of capital mobilization.

Governments and local organizations must show a willingness to collaborate effectively with other contributors to affordable housing by a willingness to share in the risk and responsibility. Creating an attractive environment for investment is imperative to mobilize funds and tap into a diversity of funding sources with a solid and mutually beneficial business plan. Pison Housing Company is a Nigerian firm in Lagos focused on real estate finance and development. It provides real estate investment banking, training, research and advisement to bank and non-bank financial institutions. It has a special focus as well in affordable housing and slum redevelopment. PHC is an approved OPIC loan originator and political risk insurance originator. It has been active in securing loans and structuring REITs for real estate development in Nigeria (PHC, 2011). Collaborating with this type of organization has tremendous implications for mobilizing funds for affordable housing.

Institutional investors, investment banks, and private investors worldwide present potential investment resources. Donors, foundations, and non-profits are looking for meaningful and impactful projects. Global Housing Foundation is an example of a great idea for mobilizing funds for affordable housing (Case Summary #5) through structured finance although it unfortunately ran into bad timing. Government organizations such as OPIC (U.S.) and DEG (Germany) along with World Bank and International Finance Corporation are investing in affordable housing and mortgage finance globally recognizing the need and the opportunity. The use of local pension funds to create a funding facility has been successful in some countries while issuing bonds backed by mortgages has been another solution. Emerging countries should actively engage in support and funding from these sources. In addition to direct investment, developing a secondary mortgage market, floating bonds, and securitization should be given consideration as a long-term goal for affordable housing finance where appropriate.

The five strategic actions that must be taken to stimulate adequate affordable housing: (1) Development of a Legal and Regulatory Framework, (2) Government Initiatives, (3) Low Cost Housing Development, (4) Development of Infrastructure, and (5) Mobilization of Funds must be thoughtfully considered and adapted within the context of individual countries and regions to provide appropriate solutions. In reaching these goals and implementing these strategic actions there are a number of challenges to overcome that are specific to affordable housing in emerging markets. These challenges as addressed earlier include:

- ❖ Restrictive Access to Land
- ❖ Lack of Access to Capital
- ❖ Obtaining Construction Permits and Approvals
- ❖ Corruption
- ❖ Lack of Transparency
- ❖ Currency Risk
- ❖ Knowledge Gap
- ❖ High Interest Rates
- ❖ Financial Literacy

Challenges Encountered and Overcome

Challenge #1: Restrictive Access to Land

Nonexistent or inefficient and costly systems of land registration and massive government control of land are two barriers restricting access to land for affordable housing in emerging markets. Many countries have little to no formal system of land registration making it difficult if not impossible to determine land or home ownership and restrict development of an effective mortgage market. For those countries that do have a land title system, it is often inefficient and ineffective, prone to corruption, cumbersome and difficult to navigate as a result of obscure fees and numerous time consuming

procedures taking months if not years to complete. For example, the International Finance Corporation and World Bank report that Nigeria has 13 procedures for registering land requiring 82 days and adding 20.9% to the cost of the land. Brazil has 14 separate procedures taking a minimum of 42 additional days and adding 2.7% to the cost of the land. Bangladesh has 8 procedures taking a minimum of 245 days and adding 6.6% to the cost of land (IFC, World Bank, 2011). The costs of such inefficiencies in time and money impede low income persons from attaining legal title to land. In Nigeria, like many other countries, land is under significant control of the government stifling its productive use, hindering its accessibility, and catering to corruption (Ozili, 2009).

Eliminating the restrictions for accessing land could entail a number of solutions. Mandating and implementing a well-functioning land registration system is one of the strategic actions to be addressed in developing an appropriate legal and regulatory environment. For those countries where some form of registration does exist, implementing a streamlined and computerized data management system, standardizing and automating procedures, and delegating various levels of authority would expedite the land registration process and reduce the opportunity for corrupt practices. Lowering fees and transfer taxes is another solution. The Millennium Challenge Corporation has assisted in promoting better land registration systems with lower fees through its eligibility criteria to obtain grant funding from the Millennium Challenge Account (MCC, 2011). Countries like Benin, Burundi, and Guinea-Bissau have computerized and streamlined procedures, reduced registration fees and transfer taxes in their efforts to meet MCC's eligibility threshold (IFC, World Bank, 2011). Other solutions might include introducing low-cost title insurance combined with clear and customary methods of obtaining title, abolishing unnecessary fees and steps for obtaining secure title, subsidizing or reducing registration fees for the low-income, and subsidies designed to incentivize developers to purchase land for affordable housing development. Protecting the poor by assisting them to obtain legal claims to land is important. El Salvador's provision of legal assistance to low-income households to complete the land title and registration process is an example of this type of protection.

Where land may be under significant government control, it may be possible to negotiate large tracts of land to be subdivided for affordable housing development, subdivided parcels provided for sale at reduced cost to low-income households, and development of new affordable neighborhoods or communities with adequate infrastructure to ease the pressure of urbanization. Land banking and legislation with provisions to diminish government control, reduce taxes and fees present other alternatives.

Challenge #2: Lack of Access to Capital

A major barrier limiting access to capital for the poor and low income market is the lack of innovative financial products, services and materials specifically designed to meet the demand of low and moderate income households. Low incomes and employment in informal business or trade presents challenges to underwriters and limits affordable housing options for this population group. Incomes may be irregular and difficult to verify and guarantors non-existent although motivation and entrepreneurial drive may be strong.

In these situations lenders must develop financial products that use alternative and flexible methods to underwrite the individual borrowers weighing heavily on character assessment. Some methods may include requiring a history of regular savings, successful history of payment on a microenterprise loan, successful completion of financial education program, complete application and solid references. It is imperative that the credit underwriter apply flexible underwriting methods and yet also show prudence so the credit offered to the borrower is appropriate and manageable setting the borrower up for successful repayment. Issuing a small loan for a short term to a borrower with little to no available verification of credit history has proved successful for Integral and ACCOVI in El Salvador, ACCION and Patrimonio Hoy in Latin America. Other options include requiring a guarantor, alternative collateral, or instituting requirement of a regular savings program as part of the loan.

A number of examples can be found in which creative financing solutions have been developed to meet the need of low-income consumers. Like Cemex (Case Summary #3), private firms and other organizations should diligently research their target market's behavior and patterns to determine the type of finance or building products that could be effectively accessed and utilized. Bundling construction materials to improve and accelerate progressive housing as designed by Patrimonio Hoy and Cemex (Case Summary #3) is one example. CrediConstruye in Mexico combined equity investment from HSBC with government subsidy to assist low-income households in obtaining home improvement loans for qualified applicants. Home improvement retailers such as Maestro in Peru partnered with a local bank to provide access to capital for home building materials through credit cards for the low-income populations. Grameen Bank in Bangladesh has been successful in making group loans for housing development in which several borrowers join forces to obtain and repay the loan (Grameen, 2011). Group building strategies may be applicable in some societies and cultures. Vouchers for low-income rental housing, tax credits or long-term tax reduction for affordable rental housing, and requiring that all new market rate housing construction include a specified number of affordable dwelling units could encourage developers to build affordable housing. These types of innovative, non-traditional financial products specifically targeted and designed to meet the need and incomes of the low-income populations are necessary for improving access to capital.

Challenge #3: Obtaining Construction Permits and Approvals

Obtaining construction permits and approvals in developed nations is a difficult task at times, so one can only imagine the difficulties that may present themselves in developing regions of the world. A lack of efficient administration for obtaining construction permits is a challenge for affordable housing in developing countries. As an example, building a warehouse in Egypt requires 25 separate procedures which can take a minimum of 218 days. In Albania there are 24 procedures to complete taking 331 days (IFC & World Bank, 2011). The long and arduous process of obtaining proper approvals only serves to

create an ongoing backup in providing affordable housing contributing to the growth of the problem including the increase in slums, crime, pollution, poor health and other social ills.

At the local level the process of obtaining building permits and approvals must be streamlined and yet encourage building safe and affordable dwellings, while not stifling and impeding it. Aaron Rose, a socially responsible entrepreneur involved in the global technology industry, shared with me a challenge that he observed for construction in some markets. On various business trips to Egypt he recalls noticing buildings throughout the city of Cairo halfway completed with construction at a standstill. He learned that the process for obtaining permits was so cumbersome that builders would often begin building without them until the government discovered the building was going up without a proper license and shut down construction.

A number of reforms have been implemented around the world offering potential solutions elsewhere. These solutions include combining procedures and eliminating redundancies, reducing fees and combining multiple fees into one, decentralization and delegating authority to other departments, creating one-stop shops, implementing electronic submissions and online application, setting time limits for issuing building permits, implementing electronic verification procedures, privatizing utilities, and the like. In cases where there are public private partnerships to create affordable housing it might be possible to negotiate construction permits to be expedited or low income households to be given priority when issuing permits.

The following examples showcase how various countries are working to overcome the issue of obtaining construction permits. In 2011 Vietnam reduced the cost to register newly completed buildings by 50% and transferred the authority to register newly constructed buildings from local authorities to another department. In 2009 Singapore implemented CORENET (Construction and Real Estate Network) to submit construction applications online reducing the approval of construction permits from 102 days to 38 days. Sierra Leone improved its building approval process in 2009 by reinstating phased inspections

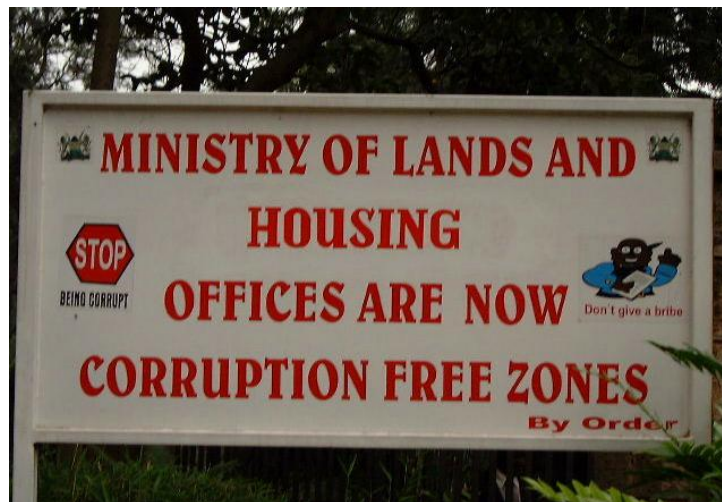
which cut 24 procedures from the process. In 2011 they streamlined the issuance of location clearances and building permits further improving the process for obtaining construction permits. Saudi Arabia instituted a one-day permit procedure in 2010 which allowed a temporary building permit to begin construction and a final building permit approved within one week. In Rwanda decentralization of the administrative system into a number of districts and the privatization of Electrogaz, a water and electric company reduced building permit and utilities connection time by more than a month in 2008. In 2009 applications for location clearance and building permits were reduced to a single form and applications for water, sewer, and electricity connections were also reduced to a single form which further streamlined processes and eliminated unnecessary procedures. In 2011 they implemented time limits for issuing various permits. In Guatemala a new land management plan, simplified approvals based on risk assessments, and mixed zoning regimes expedited the construction permit process in 2010. In 2010 Egypt has eliminated most pre-approvals for construction permits easing the process. Burkina Faso has eliminated random inspections, created a one-stop shop for permits, reduced fees, and combined multiple payments into one to improve the efficiency of construction permit approvals. Colombia now uses electronic verification in the construction permitting process (IFC, World Bank, 2011).

Challenge #4: Corruption

At a recent Wharton School of Business forum on real estate in emerging markets, global real estate developers, investors, finance specialists and executives shared a number of insights. The barriers ranking high on the participants reasons to avoid particular markets included corruption (Wharton, 2009). Where there is no trust, poor communication, and a lack of accountability either with government officials, local agencies or with partners on the ground, it is nearly impossible to effectively do business.

Corruption in some developing countries is a substantial factor of concern to both investors and local populations. Unfortunately people, agencies and governments are sometimes dishonest, ill-intentioned, and may take advantage of people or entities for personal financial gain through bribery and

other corrupt practices. Acts of corruption or tolerance of corruption by governments equates to a broken system. A number of firms provide due diligence and contract negotiations to help investors and organizations not fall prey to bribery or corrupt practices. Utilizing local and international relationships and resources to pressure potential stakeholders and agencies to refuse to tolerate corruption can assist in minimizing the possibility. As referred to previously, streamlining processes, clarifying procedures, requiring accountability at each stage (which could be as simple as providing a receipt or obtaining written documentation), and eliminating unnecessary steps would assist in minimizing opportunity for corruption. Another way of minimizing corruption is to require each stakeholder to share in the risks, i.e. to have some “skin in the game.”



Challenge #5: Lack of Transparency

Lack of transparency is another challenge which often keeps investors at bay. Transparency refers to a failure to disclose information about financial or economic conditions, lack of clarity offered about laws and regulations governing the markets, and hidden agendas. Investors must do their homework by conducting in depth due diligence through research, visits, and interviews. Improving information technology systems, requiring standardized data and consistent reporting, independent asset valuations, and professional licensing or ongoing training certifications are solutions for improving transparency. Professional associations and private real estate data firms should assist in creating a

system of standardized property valuation reporting and an online database of real estate transactions created and maintained to assist in the valuation process. Educational requirements, updated training, and licensing should also be mandated by professional associations, educational institutions, and licensing boards. Teaming up with trusted local partners who know and understand the political, financial and legal environment is absolutely essential for minimizing transparency issues.

Challenge #6: Currency Risk

Currency risk is an issue for investors from the international community who may invest in dollar-, euro-, and yen-based currencies which are then loaned or invested in developing markets with weak local currencies that depreciate against the world's hard currencies. Appropriate hedging strategies for short term or long term currency risk can be utilized to minimize exposure. Short term currency risk could include forward contracts, future contracts, money market hedging, and option contracts. In many developing countries derivatives and hedging alternatives may not be available. In these cases cross hedging may reduce foreign currency exposure by hedging using a currency whose value is highly correlated. Many smaller developing countries try to peg their own exchange rate with that of another major currency like the dollar or euro which can make it easier to determine a hedging strategy (Kelley, 2001).

Because there are limited markets for currency futures options with maturities greater than one year, alternative hedging measures can be taken for long-term currency exposure. Borrowing in the local currency is a way of minimizing foreign currency risk. Arranging for parallel offsetting loans is a way to avoid currency risk although opening up exposure to default risk. For example, by identifying a company in the country you wish to invest who also wishes to invest a similar sized amount and term in your home country, you can loan one another the money in the respective currency for the respective investments. Currency swaps can be used to avoid the credit risk associated with parallel loans. If a company cannot find a match to create a parallel loan, a credit swap can also be used which involve making a deposit in

one currency and making a loan in another currency (Kelley, 2001). For example, a U.S. business could make a deposit in a Korean bank located in the U.S. and receive a loan in the Korean won. Once the loan is repaid in won, the dollar deposit is returned. International developers in conjunction with local lenders can leverage the fact that they will be creating jobs for the economy and hold firm on using local currency when negotiating any transactions. Other ways of minimizing exposure to currency risk is to invest in commodities such as building materials or energy products that have value independent of the currency.

Challenge #7: Knowledge Gaps

Knowledge gaps can be a challenge to affordable housing in emerging countries. In places where a lack of education or the know-how to develop mortgage markets or manage large construction projects is lacking, it creates a challenge for attracting investors and developers from the international community. As technologies change and develop even in construction materials and methodologies training laborers and contractors on how to use these materials and technologies correctly is important for the low-cost technologies to take hold. As an example, Moladi (Case Summary #4) is looking into opportunities to create a university program designed to train large numbers of student how to use the Moladi technology and relieve the burden of training a new crew at each new construction site. Assistance from local and international sources may be necessary to bring training and education that will bring the local labor force up to speed. Private companies, universities and other alternative educational institutions may launch training programs, seminars and hands-on training to overcome knowledge gaps. Foreign investors may target students in institutions of higher learning in developed nations and the emerging country of investment interest who may be excellent candidates to help partner with the investor.

Challenge #8: High Interest Rates

Interest rates are critical to the affordability of lending and a common challenge in emerging countries especially with respect to affordable housing. World Bank and the International Monetary Fund track lending interest rates, interest rate spreads, and real interest rates throughout the world (2010). The

lending interest rate is the rate charged by banks on loans to prime customers. Interest rate spreads are the lending rate less the deposit rate, and the real interest rate is the lending interest rate adjusted for inflation. A sample of these interest rates in developing economies is provided in the table below showing a number of countries with double-digit rates. Interest rates vary tremendously from one country to the next depending on the economy, strength of the financial system and other factors. Based on this sample of rates, it is obvious that making housing finance affordable is a challenge.

Interest Rates

	Lending Rate	Spread	Real Rate
	2009	2008	2008
Brazil	44.7%	35.6%	38.0%
China	5.3%	3.1%	4.2%
Bangladesh	14.6%	6.7%	7.7%
Kenya	14.8%	8.7%	4.3%
Mexico	7.1%	5.7%	2.7%
Nigeria	18.4%	3.5%	18.7%
Pakistan	14.5%	6.0%	-6.7%
Peru	21.0%	20.2%	20.9%
Philippines	8.6%	4.3%	6.0%

Source: World Bank, World Development Indicators (International Monetary Fund)

Solutions for high interest rates in the short term could include subsidized interest rates from government funds or funds loaned by donors or private investors who can make loans at lower rates. Long term solutions will involve active management of inflation, fiscal policies and other variables that contribute to a stable macroeconomic environment and bring interest rates to a manageable level.

Challenge #9: Financial Literacy

Financial management in basic form involves avoiding unnecessary expenditures, setting a little money aside for emergencies, and finding a place to keep savings safe. In some countries banks have not always been a safe place to park your money so financial institutions can be viewed with skepticism. In other cases lower income populations have not had access to banking or financial products and services. Education strategies will be important to overcoming a lack of prior experience or bad experiences.

Financial education is particularly relevant for low income and poor households that operate on tighter margins and who are more vulnerable to downward economic pressures with fewer resources to fall back on (Sebstad, Cohen, 2003). Financial literacy can improve financial decision making, help people prepare for life cycle needs, cope better with the financial demands of life, and prepare people to take advantage of new opportunities when they present themselves. Learning to manage larger lump sums is important for new borrowers and critical to lenders in limiting default risk.

Deciding what approach to take in promoting financial education requires an awareness of the economic goals of poor households, how people manage resources and activities in the context of their households, how they build assets, and how they deal with risk in their day-to-day lives. It further requires an understanding of the financial landscape in which people operate – and how, why, and when they use various formal, semi formal, and informal sources of finance. These factors all affect people's capacity to assume debt, tolerate risk, and use financial resources effectively (Sebstad, Cohen, 2003).

Delivery of financial education training and counseling could include local and international financial institutions, support organizations, government extension programs, mission driven organizations and private firms with a focus on social responsibility to cast a net for reaching desired target groups. The goal is to empower people to make informed financial decisions; learn basic skills related to budgeting, saving, borrowing and investing; set financial goals and optimize one's options. Financial education can cover a range of topics; however, the relevance of topics will depend on the individuals or groups and factors related to the context in which they live. Financial literacy not only helps those with minimal resources to take more control of their lives but it improves the quality of loans made by lenders by improving repayment (Sebstad, Cohen, 2003).

Mobilizing Key Players

Carrying out the strategic actions and identifying solutions to the challenges will not come from a single source but will require collaboration from a number of key players including governments,

investors, local financial institutions, international financial institutions, the United Nations, government agencies, development organizations, donors, real estate developers, home building supply and improvement retailers, moderate and low income households. Although various organizations have put some effort into highlighting the issue of adequate affordable housing around the globe, an organization solely focused on affordable housing does not exist. A global body must be created to prioritize adequate affordable housing globally bringing all key players to the table to develop strategies, solutions, and implementation.

Conclusion

The ever increasing imbalance between supply of adequate affordable housing and the demand from growing low income populations in emerging nations calls for expedient and strategic actions to stimulate affordable housing solutions. These solutions will not come from a single source but will require collaboration from a number of key players. Because of this a global organization must be created to put a spotlight on the issues bringing all parties to the table for the purpose of coming up with effective strategies, identifying best practices to address the challenges, and focusing directly on stimulating affordable housing creation. This organization should be made up of a diverse group of key players including governments, investors, local financial institutions, international financial institutions, the United Nations, government agencies, development organizations, donors, real estate developers, home building supply and improvement retailers, moderate and low income households who are committed to the planning and implementation of affordable housing strategies and solutions. The actions which must be taken to stimulate adequate affordable housing solutions in the near term are (1) Development of a Legal and Regulatory Framework focusing on land registration, national credit bureau, and foreclosure laws and procedures; (2) Government Initiatives; (3) Low Cost Housing Development; (4) Development of Infrastructure; (5) Mobilization of Funds. These goals must be thoughtfully considered and adapted within the context of individual countries and regions to provide appropriate solutions. There are a number of challenges that will be encountered in the process of implementing the necessary strategic

actions: (1) Restrictive Access to Land, (2) Lack of Access to Capital, (3) Obtaining Construction Permits and Approvals, (4) Corruption, (5) Lack of Transparency, (6) Currency Risk, (7) Knowledge Gap, (8) High Interest Rates, and (9) Financial Literacy. Several solutions for overcoming these challenges were proposed drawing on various examples throughout the world of how these challenges have been overcome. By managing these challenges, implementing the strategic actions to stimulate adequate affordable housing solutions, prioritized focus and collaboration between the key players, low income populations can enjoy adequate shelter at a reasonable cost while all stakeholders enjoy the residual social and economic benefits.

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