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Financing Housing for the Poor
A Learning Note for World Bank Institute

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I) The Problem

By 2050, the developing world will double its urban population and triple its urban area, largely through incremental and informal settlement. Demographic and migration dynamics conspire to place unprecedented burdens on cities in the global South, with the most dramatic growth occurring in secondary cities. Informal development is a rational response by urban families who have limited resources, and limited access to formal finance and housing delivery systems. Seen in a positive light, informal settlement is private investment that has outpaced public infrastructure.

Informal and incremental housing have distinct advantages like affordable entry costs and massive scale, however, left unassisted and unguided, progressive housing costs families and governments more than formal development in the long-run and can result in slum conditions. While the per household cost of formal development declines as the size and density of the project increases, the opposite is true in slum upgrading contexts.

Rapidly urbanizing African and Asian cities have a 15-20 year window of opportunity to meet the low-income settlement challenge and create well functioning urban areas that drive economic growth. The urban dystopia of large slums in Latin American cities can illustrate some of the worst effects of ill-managed development and have provided a laboratory for program experimentation.

Governments must react swiftly, use their regulatory and budgetary resources strategically and demonstrate long-term continuity and commitment in order to have positive impact. Effective responses require the coordination of different levels of government, developing financial and administrative capacity at lower levels of government, where it is often limited. Avoidance or paralysis in the face of this challenge results in dramatic economic, social, health and safety consequences that affect the greater population.

Practically speaking, housing strategies must balance progressive approaches that improve existing settlements with new production of housing. Most governments cannot afford to subsidize a complete unit of housing for their entire population. Most low-income households prefer to upgrade in situ rather than relocate.

Facilitating housing finance for the poor is problematic for any government, but this wave of urbanization presents unique challenges to governments in the global South. Financing housing for the poor in these contexts is more complex than simply establishing a finance program. Any intervention must also take into account: **tenure informality,** which undermines the use of some finance mechanisms; **income informality, variability and scarcity,** which makes it more difficult to define target populations and to involve them in repayment; **infrastructure limitations**, which increase the cost of providing adequate shelter and demands the involvement of municipal actors; and **the scale of need,** which requires the allocation of significant resources and the establishment of realistic expectations.

The housing finance experience of developed and emerging countries reveal theoretical principles and practical lessons that are useful for governments to consider in crafting their own housing and finance programs for the poor. The full depth and breadth of housing finance for the poor cannot be captured in

any one document, as it is perhaps the most complex of public policy interventions. However, after reading this note, policymakers should possess a grasp of the key issues which will prepare them to engage with technical experts in the strategic design of housing finance mechanisms that are appropriate for their situation. To that end, this learning note will give policy makers:

- a basic understanding of the core theoretical principles of affordable housing finance,
- a typological presentation of the housing finance tools that governments use,
- general guidance about housing finance program development
- specific recommendations based on the practical experience of the authors and analysis of specific examples from around the world.

II) Crafting a Government Response : Challenges

Governments in the global south are often daunted by the challenge of meeting the unprecedented depth and scale of their low-income citizen's need for housing. Housing provision and finance is a complex public policy intervention and it can paralyze even the most well-meaning public official. Urban environments are themselves characterized by complexity – complexity of use, tenure, socioeconomics, ethnicity, etc. and monolithic interventions can sometimes destroy what makes cities desirable. Productive housing finance interventions usually require simultaneous collaboration between the private sector, government, and donors that does not come naturally to institutions. However, multi-actor collaboration is essential in order to bridge the scale and complexity gap between resources and beneficiaries. Housing finance matches the slowest asset (land) with the fastest (capital). It matches the largest scale financial systems (billions of dollars in capital markets) with the smallest scale (individual slumdwellers' budgets). Bridging these gulfs require multiple levels of intermediation, meaning that housing finance requires a complex "ecosystem" of programs, resources, and actors.

The speed with which governments must react is another challenge. The world's unprecedented rate of urbanization means that problems which, in the nineteenth century, arose over decades and were solved over decades, now arise in a handful of years. This urgency is exacerbated by the fact that in today's societies, even the poorest households have real-time awareness of the richest. As the cell phone and internet reduce intellectual distance, they make the poor more aware and hence more demanding and impatient for their governments' response. Governments who are experiencing the urbanization of their population now must react swiftly.

Finally, the permanent nature of housing inspires caution on the part of policymakers. Homes can be the physical and enduring expression of policy. Every city in the world has some properties that are the reminder of a failed housing policy. This dynamic can make policy makers hesitant to take bold and decisive actions for fear of making a misstep that has multi-generational consequences not only for residents, but also for the boarder community. Giving policymakers clear information and access to technical expertise can help them proceed with confidence.

III) Crafting a Government Response : Realities

Before designing housing finance programs for the poor, policy makers should first recognize the near-universal realities underlying such activities.

a) Each housing finance system functions like a unique ecosystem, where all elements influence one another. Each nation's housing delivery systems represent a complex and interconnected ecosystem.[1] Individual elements such as regulation, capital flows, participants act in this shared environment. None of these individuals create the ecosystem, yet all of them collectively define it. However, as a resource provider and regulator, government can exercise great influence over the behavior of other actors and the health of the system overall.

[1] For additional background, see http://affordablehousinginstitute.org/what_ecosystem.php.

These housing finance ecosystems are typically no larger than nation-wide in scale, because national laws and capital policy are such powerful influences. While each is unique, housing finance ecosystems can be grouped, based on characteristics like origin of the legal system (e.g. UK colonies versus US-influenced); income levels and disparity (emerging countries versus very poor); relative strength of banking, corporate, and government sectors; existing delivery systems and housing stock; and cultural/ religious/ social elements.

No single housing finance program works in all environments. Hence, no housing policy or finance innovation can be transplanted, fully intact, from one place to another. Any import must be carefully selected and locally adapted. Yet by contrast, capital and housing financial principles are universal. Understanding these affinities and distinctions is the first step to learning from others' experience.

b) Government involvement in housing finance for the poor is necessary because "sustainable affordable housing" always costs more than the poor can afford. In any urban market, 'sustainable affordable housing' will always cost more to produce and maintain than poor people can afford to pay. This affordability gap is true regardless of location, configuration, tenure, or government environment. In order to ensure adequate housing for the poor, government must become involved. Government can close the gap in many ways, but every strategy will require government resources, in either cash (forms of cash) or non-cash forms (in kind, such as land or zoning). These options will be explored in greater detail later in the note.

Sustainable Affordable Housing Definition

Sustainable affordable housing means (1) middle-market-competitive quality suitable for its neighborhood, (2) affordable based on householder income in the target market, and (3) physically and operationally maintained over many years.

c) Government participation in housing finance for the poor requires a double bottom line analysis which considers both economic and social outcomes in the near and long-term. Market forces by their very nature, will consistently exclude the poor from access to affordable housing that meets minimum quality standards. The use of public sector resources can be justified, and properly designed, when thought of in terms of both their economic and social impacts.

The positive and near-term societal outcomes resulting from public sector housing investment include physical and esthetic improvements, community health, safety / security and access to labor, etc. and are among the reasons that public sector resources are allocated to finance housing for the poor. These non-economic impact are weighed alongside the financial terms of housing programs.

In the long-term and at the project level, affordable housing is viable only if it meets these types of social objectives while also meeting economic objectives (without being propped-up). In this context, *economic means* that the property (whether owned or rented) must receive enough capital to be maintained and even improved over time. *Social means that* that the property must continue to serve as affordable housing in some fashion. If over time, the social mission triumphs at the expense of economics, the property deteriorates (eventually to the point where undermines both the economic and social agendas). Conversely, in some cases where there are no regulatory constraints, the economics or profitability of a property improves over time and affordability wanes. This may be a legitimate public-policy goal. In fact, many production-oriented programs are only concerned with affordability delivered to the first buyer. Over time, if the property is physically maintained, it becomes less "affordable", migrating into the mainstream market and potentially profiting the original beneficiary in the process. In these cases, the effect of building the subsidized home, therefore, is a wealth transfer to the owners, be they occupants or landlords. Protecting long-term affordability is generally considered more important for rental housing programs, and presents a much more complex financing and governance challenge.

d) There are always unintended consequences of any program and these increase over time. Even if the ideal program could be created, the market always changes, and the very presence of a program changes the marketplace. All subsidies distort markets; indeed, that is their very purpose.

Affordable housing for the poor can rarely be accomplished without these interventions in the market. Complex ecosystems, however, adapt to distortions, in some cases nullifying them, in others exaggerating them. As a result, every program, whether well or badly designed, eventually obsolesces. Simultaneous with its obsolescence, beneficiaries and other stakeholders will seek to influence government to preserve or expand the program. Somewhere between durability of program and entrenchment, lies an ideal of periodic reassessment.

e) Urban housing will never be physically durable unless it is legally financeable. In rural environments, housing can be a non-money good, created solely by labor and occupied with negligible monetary cost. In urban environments, the rising price of land assures that physically durable housing can never be a non-money good. Homes in these environments will always have a cash transfer value. Generally, the lower that transfer value, the less any occupant or owner will invest in improving the physical property. Combine these economic realities and it follows that to move urban housing from the ramshackle and transitory to the durable and sustainable requires creating a financial marketplace in which housing rights can be openly bought, sold, rented, and financed – and with the weight of government policy and enforcement backing it up.

IV) Crafting a Government Response: Roles

Meeting the acute housing needs of the poor is an important concern for government. However, this does not mean that government is the sole actor or responsible party. A clear understanding of the roles of various levels of government, and vis-à-vis actors in the private sector, is important when creating housing finance systems.

a) Government has four primary functions that support housing finance: establishing law, creating an enabling environment for capital, encouraging public-private partnership, and allocating subsidy.

Without ***law*** that binds governed and governor, renter and owner, investor and builder, no one invests. Government must provide and enforce law. Decay in the rule of law leads to under-investment and disinvestment, as Zimbabwe, Kenya, and Venezuela variously show.

Investing ***capital*** in housing – whether by a government, company or householder – requires a belief that both property and capital will have value in the future. Investment accelerates in an enabled capital environment, as the post-reform Mexico and Turkey demonstrate.

Public-private partnerships mean that each party can concentrate on what it does best. In housing, government makes a great partner but a less successful unilateral actor. It can establish over-arching policy, set goals and objectives, provide resources, and enforce rules, as shown for example by Chile's experience with demand-side grants in homeownership vouchers. It does poorly at direct development, construction, ownership or operation, as illustrated in Egypt by the Ministry of Housing's direct new construction programs.

Subsidy is intrinsic because urban housing always costs more to produce than the poor in any society can afford to pay.

b) Multiple levels of government must act in concert to be most effective in the delivery of housing.

Housing has three critical elements: property, people, and capital, and each level of government naturally attaches to one of these elements. These are illustrated in Table 1.

Capital is a national issue. Capital-markets are national in at least three ways: risk, liquidity, and taxation. (a) *Risk.* Because all transactions are denominated in a form of currency, transaction-level risks are layered over currency-valuation risks. (b) *Liquidity.* Financial markets, in particular mortgage legislation, are a core driver of change, as Turkey is demonstrating with its new mortgage law and efforts to create an asset-backed securities market. (c) *Taxation* is critical, both in terms of compliance rates and in structure and incentives. This is demonstrated by US experience both of

long standing (the home mortgage interest deduction) and recent vintage (the first-time homebuyer tax credit).

People are a state or regional issue. The size of a market is dictated by the mobility of people. Most markets are regional or metropolitan. Cities are bounded geographically by the distance that can be covered in a daily commute from home to work. Transportation is thus intimately connected both with city scale and with housing patterns. All these are provincial or metropolitan issues. Economic and housing markets, are seldom larger than metropolitan-scale. Job creation and economic efficiency are most powerfully influenced by decisions at the metropolitan and municipal level.

Property is a local issue. Real estate is unique among household and economic assets in that it is immobile. Municipalities, therefore, are the best decision-makers regarding land use, zoning, and property use. Nations with strong municipal governments, where real estate taxes are assessed and retained locally, and then strongly correlated with municipal services (e.g. police, fire, schools), tend to have very strong local commitments to housing diversity and affordability.

Table 1
The three levels of government: objectives, tools, initiatives

	National	***Regional***	***Local***
Government unit	**Federal**	**State / provincial**	**Local**
Principal focus	**Capital**	**People movement**	**Property**
	$ ¥ £ €	bc	+
Objective	Rapid and efficient movement of capital into property	Metropolitan economic development Bridging national programs to local needs	Effective land use to produce robust and complex ecosystems
Principal tools	Investment taxation Macroeconomic policy Primary/ secondary mortgage markets Credit enhancement of sub-sovereign entities Title, settlement, disclosure standards National housing priorities	Use of revenue-shared block grants Zoning overrides and distributive mandates Transportation grid	Zoning (including use, mix, density) Property taxation Municipal infrastructure Local services (schools, safety, health)

c) Public-private partnership works best … as long as roles, incentives, desired outcome and enforcement are clear and consistent.

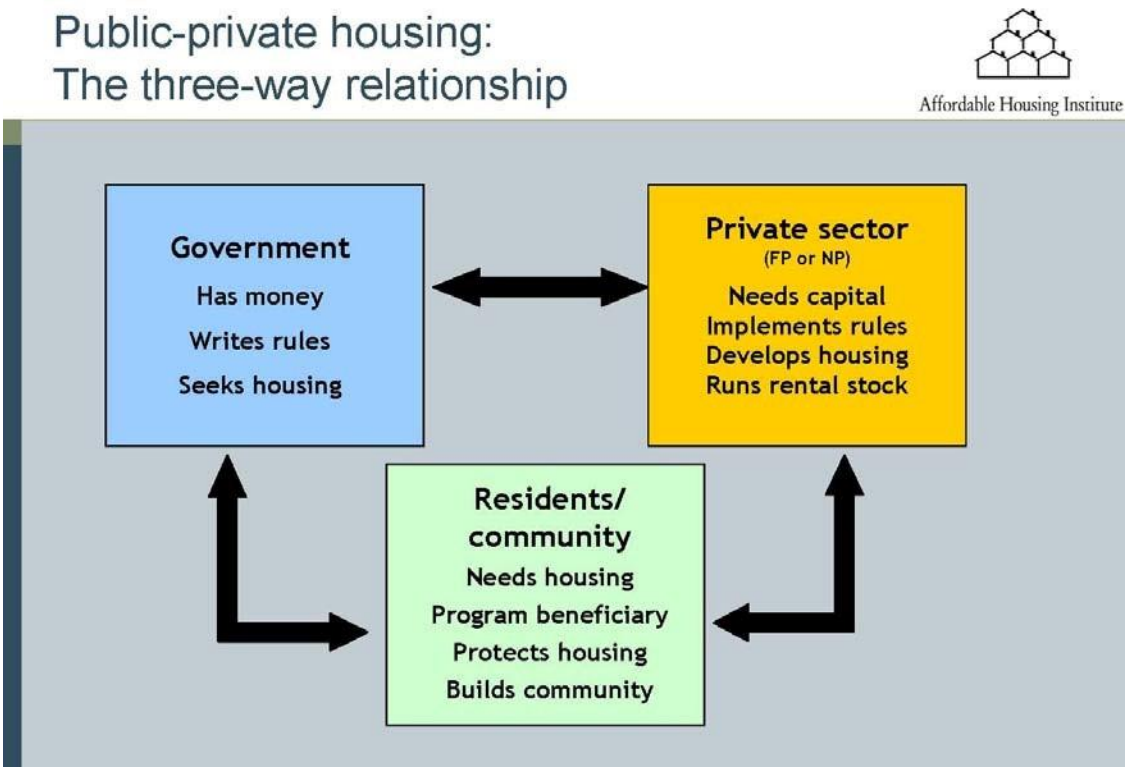
Decades of experience, and billions of dollars of expenditures throughout the developed world, have demonstrated that government is a very poor direct provider of social housing. Examples include: “council housing” in the United Kingdom, “public housing” in the United States, and the “Cités HLM” in France. Better is a public-private partnership where each party does what it can do better than the other parties:

The ***private sector*** **expects from government** clean boundary rules, prompt and consistent administrative guidance, even-handed selection and judicious enforcement of law, acknowledgment of its profit motive, efficient decision-making, and protection against political or journalistic vilification.

The ***public sector*** **expects from private participants** that they will accomplish what they say they will; be financially accountable; have real equity at risk; take their financial losses when things go badly; and not seek unwarranted bailouts.

In order to work effectively with the private sector, government must create programs and agencies that make sovereign resources available to the private sector if—and only if—the private sector delivers the desired kind of home, at an agreed-upon and affordable price, for the benefit of a target

customer group. When the relationship between the public and private sectors is balanced, there emerge developers, builders, lenders, and originators, who actively create homes and recruit affordable customers to buy or rent them.



V) Crafting a Government Response : The Types of Tools

Government involvement in housing finance can encompass a surprisingly wide array of options. The first helpful distinction to make is between housing finance through the use of cash and non-cash resources. In addition to spending cash, government has at its disposal a variety of tools that have monetary value but do not require cash investment at the project level. Cash and non-cash tools can be layered and are generally compatible with one another. Non-cash resources are often overlooked and cash resources are often over subscribed. Understanding how the various types of tools are applied most effectively can help policy makers select the best tool(s) to their fit their specific situation and goals.

a) Housing Finance Tools: Non-cash

Non-cash tools are 'off budget' or 'off balance sheet,' and thus cost government relatively little. Yet these resources can be converted into significant monetary value by developers or individual households. If structured properly, this value can be used to increase affordability. Compared with cash resources, non-cash resources have low visibility at the project or household level. This can be a drawback or an advantage, depending on the circumstances. The low visibility of non-cash tools can make them more politically palatable. This low visibility can make non-cash tools more difficult for policymakers to recognize and deploy and may also prevent governments from receiving appropriate recognition for their contributions As a general rule, non-cash tools are more commonly used by municipal and metropolitan governments because these are closer to the point of delivery.

Types of non-cash resources are:

Land. Making land available for new development or formalizing private ownership is arguably the most powerful non-cash tool available to any government. It can induce development that would not

have otherwise occurred and it can greatly impact affordability. Land may be conveyed directly by a government grant of its own land, or a government entity may make land available indirectly through eminent domain or compulsory purchase.[2] Delivery of land, either through its direct deed or through removing title uncertainty, is essential to the development of urban housing as a financial asset. Irresolution of land tenure automatically blocks or slows the formation of urbanized affordable housing (two examples being Mexico's ejido land system and South Africa's KwaZulu Natal communal tribal land).

As cities grow, land use densifies, which tends to mean that the structures sited on the land become progressively larger; in turn, that drives urban land toward parcel aggregation or assembly as micro holders give away to larger, city-block-sized developments (often high-rise). Hence compulsory purchase as a vehicle for land assembly is essential to modern, planned urbanization, although its deployment raises significant concerns about private property rights. Owners/residents of claimed property who seek to prevent government taking face a difficult challenge as private litigants rarely prevail when suing an arm of the government.

Governments must ensure that the value of their contributed or formalized land is converted into affordability for the poor, instead of simply increasing profit margins or creating windfall income. Government should place restriction on the use or transfer of any land that it assembles for the development of affordable housing. These legally-binding obligations should be recorded in the land title, and given priority and preeminence over to any financing or construction later placed on the property.

Zoning and Land Use. In urban contexts, mechanisms that control the density of development and the use of land can have *substantial* monetary impact. Without government intervention, increased urban density typically works against affordability and availability of housing. However, some governments have discovered that limiting density can actually create a renewable and monetizable commodity that government and private can sell or trade. Many of these programs are state or local, such as Mumbai's Transferable Development Rights, New York City's air rights. Other tools like the US State of Massachusetts' Chapter 40B and national programs like Brazil's ZEIS and Colombia's Macro Proyectos overrides, are all examples of how zoning can be used not simply to shape the physical nature of development, but also to create affordable housing.

Trunk and on-site infrastructure. Governments can use the provision of infrastructure as a tool to improve the quality or affordability of housing for the poor. In general, all utilities are delivered through a large network. Installing infrastructure networks places on government substantial costs that take generations to recover, and in some cases is never fully realized. Those who are already served by public infrastructure often take it for granted as a public service owed to them as citizens. Throughout history (dating back to the Romans), only the very rich have been able to afford purely private infrastructure. Every time an infrastructure network is extended to encompass previously unserviced settlements, the municipal government incurs additional expenditure. Pockets of informal housing and slum neighborhoods are often excluded from the existing grid because they were settled after the infrastructure installation. Alternatively, as in the cases of Dharavi (Mumbai), Neza (Mexico City), Paraisópolis (Sao Paulo), some were settled outside of original service boundaries, but eventually the cities expanded around them. In either situation, their service connection is not an affordable, incremental proposition. and these populations may be excluded from having an effective political voice.

When these areas are already or are intended to provide housing for the poor, the prospect of repayment is even less likely. Retrofitting of basic utilities (and new technologies like internet connectivity) into cities has become a major financial and logistical challenge for governments in the twenty-first century. Roads, power lines, water and sewer, telephone, and the internet all require a network, with both monopoly implications and huge scale economies.

[2] Eminent domain and compulsory purchase are powerful government rights that are fraught with thorny issues of both public policy and administration. The clearest jurisprudence around eminent domain is the US, where the Fifth Amendment provides "nor shall private property be taken for public use without just compensation." In US jurisprudence, two conditions are required before government may take the property: (1) Public use necessity: the property must be necessary to an essential public use. If this is not found by an independent court, the property may not be taken. (2) Fair market value paid to the owner of the taken property, based on its as-is value.

The resulting 'last mile' problem besets every network-based utility. It also besets developers of new-build greenfield properties, as the site-level infrastructure – interior roads, poles, and pipes – adds cost to the housing's price and nothing to its market value. Additionally, informal urban locations are usually sited on poor land, which may suffer from flooding, landslide risk, or site contamination. Provision of on-site infrastructure or site remediation / preparation costs represents significant value to the developer or owner.

Concessionary utility pricing / rate advantage. Governments can impact the affordability of housing by reducing the costs of necessary utilities. It is well documented that the informally-settled poor pay much more for basic utilities, per unit of consumption, than do those connected to the grid. This reality coined the familiar phrase "It is expensive to be poor." Utility companies, whether private or state-owned/ regulated, are loath to add new customers whose consumption will not generate an adequate return on their incremental infrastructure; they also fear free-rider and shadow-user effects. Government utilities can provide an enduring rate advantage to lower-income communities and hence abate the economic drag otherwise imposed on those neighborhoods.

Risk assumption or credit enhancement. Government bodies can assume some amount of contingent financial risk in order to facilitate private sector lending for the development, improvement or purchase of housing for the poor. As financial institutions move down the income or price pyramid, they impose higher interest rates and tougher credit terms on their borrowers. For borrowers (institutional or individual) the affordability of financing presents a paradox: the less one can afford, the higher the cost of funds. This reflects lender expectations of higher risk of default on loans made in this sector and greater loss in the case of such defaults.

Government can intervene in this equation by taking on the extraordinary credit risk associated with lending to affordable households or properties. This can be accomplished through the purchase of loans originated by others, through insurance of loans originated through approved intermediaries (the US's FHA, Fannie Mae, and Freddie Mac), and by guarantees provided by one level of government to another (e.g. a national government to a city government) or government to the private sector. For instance, Sao Paulo's Guarapiranga municipal infrastructure slum upgrading program used IDB financing of the municipality, guaranteed by the state of Sao Paulo and the nation of Brazil. Whenever possible, government entities should seek to limit their maximum exposure when giving such guarantees (a portion of the loan vs. entire amount). Special care in structuring risk assumption in the case of individual borrowers is essential as government guarantees of individual loans has produced poor repayment results.

Tax relief for development / construction. Governments most often use tax relief to incentivize the development of new housing. Government imposed expenses like sales tax, VAT, stamp duty, and filing fees can contribute significantly to the cost of developing new housing. By exempting eligible production and to a lesser extent, acquisition of affordable housing, government can reduce overall costs and increase affordability. Government can offer this relief based on any number of criteria including configuration (exempting rental housing development from VAT), use (exempting regulated rental), or ownership (exempting Housing Associations from VAT or income tax). Tax relief can be structured as an ongoing and predetermined program, where eligible activities are automatically eligible to claim the tax relief. Alternatively, governments that wish to have greater control will allocate tax relief through a competitive or iterative application process, which allows them to determine on a case-by-case basis. Central governments most often structured their tax relief in established programs, where as state and city governments (whose role in taxation is often much more limited) find it more effective to evaluate on a project by project basis. In the global South, lower levels of government have a very small role in taxation that may limit the use of this tool. Kenya and Brazil are among countries that offer VAT relief. The majority of new affordable housing production in the United States is a federal tax credit system that some states and municipalities administer and/or match with their own tax relief.

Governments often find it easier, both politically and administratively, to forgo future tax revenues, than to collect tax revenues and allocate resources. A common rationale for the use of this tool in new construction is that the tax would not have been generated at all if the housing was not developed. Therefore, the taxing unit of government is still benefiting.

Ongoing tax / fees relief. Governments can increase the affordability of housing through the provision of real estate and income tax or municipal fees relief. Most urban land is taxed on its current fair market value and the proceeds used to pay government for delivering infrastructure and municipal services. Relief from typical taxes and fees, either in the form of abatement, refund or exemption, acts as an embedded subsidy, which reduces the overall cost of housing. This tool can be used on a project or individual household level. For instance, some US states offer lower real estate tax rates to property owners who will commit to housing low-income renters. Many countries offer a deduction of mortgage interest from personal income tax, which indirectly subsidizes and incentivizes homeownership. A long list of countries share this model, including Mexico, Kenya, Sweden and the Netherlands.

Even non-cash tools require government resources. Tax relief for development or on an ongoing basis (discussed in the last two sections) can also be seen as quasi-cash, since they are the waiver of government of a cash resource it would otherwise collect in the normal course of business. However, the foregoing of a potential revenue stream[3] – one that a government could obtain only if property is developed in the future – is not a budgetary or balance-sheet transaction today, so we classify it as non-cash. To a lesser extent, most non-cash tools have some cost implications to government, even if these are indirect, long-term or contingent in nature. We present these tools as non-cash to reveal their structure, but not to contradict the assertion (made in Section III: Crafting a Government Response: Realities) that sustainable affordable housing for the poor will generally require government resources.

b) Housing finance tools: Cash

Housing finance tools categorized in this note as cash, involve government participation directly in the financing of housing. Unlike non-cash resources, cash resources are visible and readily quantifiable at the project level. The obvious drawback to the use of these tools is that they clearly divert government resources from other potential activity. While readers of this note may agree that housing for the poor is one of the best possible uses of government resources (considering both the economic and social outcomes discussed in Section III), there are always competing priorities. However, taking visible and direct participation allows government to have an active and effective role in formulating housing solutions. Politically, this visible participation in the finance of housing for the poor can result in accolades or criticism depending on the specific environment. The political reaction to the use of cash tools is often affected by the way they are applied which can make them more appealing to different constituencies.

Cash resources work through two channels; supply and demand. ***Supply side*** *tools are* attached to particular properties, with the goal of increasing production or quality. ***Demand side*** tools are connected to residents, with the goal of enabling them to buy more or better housing. A valid case can be made for either type, and most housing finance ecosystems feature some of both. Significantly, some governments (e.g. Turkey) are fond of supply-side interventions, which deliver ribbon cuttings and engage more institutional partners. Others (e.g. South Africa) prefer demand-side mechanisms, which more directly connect with voters.

We categorize cash resources into the following types, all of which can be supply-side or demand-side:

Grant Subsidies. Grants are the simplest and quickest form of cash resource that government can apply. Government simply gives money directly to a public or private sector entity to develop, acquire, renovate, rent or operate a property. Examples of such funding include 1930's public housing in the United States (supply side, public) and continuing with more recent examples such as South Africa's homeowner 'birthright' subsidy, (demand side, private).

This subsidy reflects South Africa's constitutional commitment to housing as right. Funds are administered by the Department: Human Settlements (DHS) and are allocated twice a year to states

[3] The ring-fencing and pre-allocating of potential increases in future rates as a means of automatic non-budgetary funding is the policy and political rationale behind tax-increment financing, a common tool in the United States.

based on their capacity to place the funds. Unused funds are recalled from the states and reallocated to jurisdictions that have projects ready. States and municipalities are responsible for providing "top-up" funds to cover the differential between the subsidy allocation and the actual cost of housing production which can be influenced by land cost, higher quality expectations and other local dynamics. Subsidy-eligible households make between R 0 – R 3,500/mo. (with loans available to households earning up to R 7,500/mo). Eligible uses of the subsidy include individual home purchase and construction of multifamily projects. The amount of the direct subsidy is currently set at just under R 45,000 per household. However, these are typically paired with another R120,000 of indirect support in the form of infrastructure.

While the simplicity of grants is appealing, they do have distinct disadvantages. The first is that long-term accountability is nearly impossible. Once funds are released, government has limited control over their use. The economic benefit of the grant is rarely transferred beyond its initial recipient. The consistent and long-term use of grant funds can eventually inflate property and construction prices. Additionally, these tools can become so popular with recipients that government is precluded from ever considering other, less capital-intensive tools that provide greater accountability and duration of affordability. Grants can be offered by all levels of government. Sizing grants modestly and using them to leverage other sources is generally advisable. For the most part, governments have moved away from 100% grant funding of housing in favor of models where government grants fill a gap in available resources.

Hard debt with preferential terms. Governments can play an important role in helping to structure or provide debt that increases the production of housing or achieves higher levels of affordability. Loans offered through, or backed by, a government entity can offer special features such as high leverage or lower interest rates. In spite of their preferential terms, these loans require mandatory repayment according to a predetermined schedule. For this reason they are termed "hard" loans in contrast to "soft" loans which will be described in the next section.

High leverage products reduce the borrowers' required down payment or deposit. This can help households afford more or higher quality housing than they would otherwise. High leverage can be applied to the demand side, as is the case with US loans to veterans (which require only 3% down payment), or to the supply side as is the case with US multifamily rental loans which can exceed 90% of development cost. This tool is favored for home acquisition, and is often targeted to particular "deserving" constituencies (e.g. veterans, 'first responders,' and civil servants such as teachers or nurses). When high leverage loans are offered by the government as direct lender and access capital at its sovereign borrowing rate, the implicit subsidy costs can be masked and seen off-budget.

Advantages of these products include modest, almost negligible budgetary costs, if loans perform. Additionally, these costs are incurred annually, and disappear upon refinancing. Disadvantages include potential for valuation manipulation and moral hazard in origination as was demonstrated recently in the US where prices were routinely inflated and excess proceeds rebated among the participants. Additionally, these products can experience inflexibility in recapitalization or refinancing, with a high principal balance that may exceed the property's normal market resale value.

Interest rate subsidies can be explicit or implicit. An explicit subsidy occurs when a lender makes a normal market-rate loan and the government provides a co-payment with each direct borrower payment. In an implicit subsidy, the government (or proxy) lender offers financing at one rate to the customer, then securitizes the instruments at a higher market rate in the capital markets, taking the entire resulting discount up front. A similar interest rate subsidy effect can also be achieved by allowing the interest on bonds that are secured by eligible housing to be exempt from income tax. The result is that the market will price those bonds at a pre-tax interest rate commensurate with the after-tax yield on similar taxable instruments.[4]

Interest subsidies are popular during periods of high interest rates (which usually accompany high inflation), in part because they are perceived as temporary. They have many of the same advantages

[4] In the US, for example, which has roughly 30% marginal tax rates, tax-exempt bonds normally carry interest rates roughly 30% lower than taxable, so if the taxable market were at 5.0%, a tax-exempt bond would yield 3.5%. Today, however, the US tax-exempt market is in disarray as a consequence of massive excess tax capacity in the US financial sector, a consequence of the losses banks and other financial institutions have taken, so the tax-exempt-to-taxable rate spread is quite narrow.

as high gearing, including payment yearly rather than up front (unless, that is, the securities are resold at a discount). Their weaknesses are often in the formulas used to calculate the interest subsidy. If, for instance, the actual borrowing is an adjustable or variable-rate loan, the subsidy amount can spike in a recession, precisely the time when government is short of cash, and the public costs can run away from the original projections.

Soft debt. Governments have a unique ability to play the role of patient lender and in doing so can encourage the development of new housing, or increase affordability. In these programs, a government entity lends money to a developer or property owner, and takes a subordinate lien position to other lenders. The amount or existence of year-to-year payments on this government debt is dependent on future events. Common contingencies include resale, refinancing, or in the case of income-producing property, a percentages of cash flow. The repayment obligation is sometimes forgiven, in whole or in part. This is usually done after some number of years of successful continuous ownership or occupancy by a targeted low-income population.

Soft debt's advantages include its flexibility as a gap-filler between market-provided hard debt and the borrower's equity or deposit. Unlike high leverage loans, where the entire loan is exposed, in soft debt situations the government's exposure is limited. However, the obligations that accompany soft debt are often overlooked or poorly enforced. This is particularly true in homeownership developments where non-recorded transfers become common, where neither the seller nor the buyer wishes government to know the property has changed hands. Enforcement can be problematic, and the political pressure to forgive later contingent payments can be great.

Soft debt from government sources are commonly used in the UK for shared ownership schemes and in the US for new rental housing production. In the US this mechanism is also used by private philanthropies, under the rubric of Program Related Investments (PRIs) which are loans made to Mission Entrepreneurial Entities (typically but not always NGOs) to support housing development.

Hard equity. Governments can provide equity to encourage the development of affordable housing when and where it would not occur otherwise. When equity is offered by government it is often at a concessionary rate or with a buyout option. This tool differs from a grant in that the government gains an ownership interest in exchange for its capital. This ownership stake may be in the property, or the organization developer/ operator and seeks an economic return on its capital. Equity is high risk capital. It is the first spent, first lost, last paid. As such, it is normally a critical element in assembling a financing package. It encourages investment by other capital providers and abates their risk, both in terms of default probability and loss given default. The variability of return allows social investors (public or private) to be confident the recipient will use market discipline, even while the funder might tolerate higher risk, longer tenor, and lower return than a purely market investment.

Hard equity is most often used at the entity level, to seed new entities that need to be in business to prove their concept, but which if the concept succeeds should be able to grow to scale by tapping the conventional capital markets.

Hard equity's advantages include flexibility, control (shares normally command board seats), and bellwether additionally (more money follows). Its disadvantages are that the investee is a true partner, not a borrower, and as a result the capital provider's control may be limited – and there is no security remotely similar to that available with debt instruments.

South Africa's SA Home Loans is an instructive example, with its hard equity coming from the Open Society Foundation, NURCHA (an arm of the South African government), and the IFC. The US's poorly- designed Nehemiah housing program[5] also delivered modest hard equity grants to deserving buyers through the intermediary of a non-profit.

Soft equity. Government can provide resources to incentivize housing development or affordability by contributing soft equity, in the form of housing tax credits and tax incentives. Government

[5] Nehemiah's grants were of 3% equity coupled with 97% financing, meaning the buyer could effectively receive 100% leverage. That plus routing the capital through a questionable intermediary – an obvious risk flaw – exposed the federal government to substantial moral hazard. Despite this absurd vulnerability, the program had such strong legislative supporters the Administration was unable to shut it down until several billion dollars' worth of FHA losses had been incurred.

provides soft equity when it offers a future tax deduction or credit to an individual or institutional entity if they provide housing of a desirable use or activity[6]. The recipient then transfers the rights to that future tax benefit to an investor, in exchange for cash resources that can be used to build low-income housing immediately.

Soft equity is a distinctive form of money with unique advantages: perfect risk transfer (pay only after performance, not before), collectible claw-back (beneficiaries by definition file tax returns, hence are collectible), and transferred administration (folded in to the established tax system). Disadvantages include indirection, the market discount of converting the future credit into present cash (with the potential for intermediaries making profits along the way), and the necessity for a sophisticated tax-advantaged-investment capital marketplace. It takes a well-developed and efficient / transparent financial ecosystem to make soft equity worthwhile. Deduction-denominated tax incentives can be hard to cost in budgetary terms.

Soft equity can be targeted to particular uses or customers (e.g. first-time home buyers) and particular geographies (e.g. a city or neighborhood). In recent years, South Africa has experimented with an Enterprise Zone form of tax deductions, with demonstrable if small-scale positive marketplace response.

Operating subsidy. Government can increase affordability of existing housing by subsidizing operating costs. This subsidy can come in on the supply-side when given to property owners who then can charge their residents low rents. It can also be used on the demand-side when given directly to the householder or resident to help defray their costs. This subsidy may be allocated based on any number of formulas that may take into account: actual property operating costs and the resident income and ability to pay. It can even take the form of operating support for an entity rather than a housing project. (The United States public housing system and the UK's housing benefit scheme both use extremely complex means-tested operating subsidy applicable to the entity, property, or household level.)

Means tested operating subsidy can deliver very precise affordability, which is its main advantage. Other approaches that rely on proxies such as price or income eligibility can be less accurate. Conversely, it has the disadvantage quickly becoming a political entitlement, even if it is not a legal one. Further, means-testing can encourage moral-hazard behavior (quit a job or conceal income to receive/maintain subsidy) that tends to work against great poverty alleviation goals. Moral-hazard cost expansion occurs regardless of whether the counterparty recipient is public or private, company or household. Operating subsidy also tends to distort the market, particularly on the demand side, and invites graft (particularly when means-tested).

Redirective subsidy. Government can capture revenue from another income stream and direct it to housing. This occurs as either as an internal deduction within government budgets or as a surtax. The resulting stream of resources can fund any other tools allowing government to direct the resources without funding the activities from appropriations or collecting it directly. Common collection agents are employers (out of payroll deductions), transportation (e.g. railway tickets), or utilities (e.g. in water or electricity rates).

Redirective subsidies are often inaugurated for political reasons. For instance, upgrading slum infrastructure to clean up a reservoir is funded by charging middle-class ratepayers higher water rates for the resulting clean water (Sao Paulo). In another example, railway commuters are charged extra fees for clearing shanties away from the track right of way (Mumbai).

Advantages of this approach, aside from enactability, include ease of collection; reliability of forward estimates of future collections; ability to match-fund the new stream with an expenditure obligation, and hence ease of selling bonds against the stream; easy compatibility with other elements (such as infrastructure improvements or direct lending). Disadvantages are dependency on a non-housing use

[6] These tax credits are not to be confused with various versions (common in Ireland, the UK, and the US), where the government elected to make a direct benefits transfer to a set of constituents through the vehicle of a rebate in their payroll taxes. That is merely a social-welfare scheme that piggybacks onto the employer-employee relationship as its zero-cost delivery vehicle.

(so if the economy slows down, the funding dries up) and the inherent disguise of the wealth transfer (sometimes facilitated through Provident/Housing funds).

VI) Crafting a Government Response : Key Policy Decisions

Creating an effective housing program requires the application of sound technical and financial structuring principles, but it is essential to first have clarity on the political intent and policy directions. This clarity must be established at inception of a new program in order to be effective and efficient from an administrative and economic point of view.

Core policy / political decisions that must be taken before designing the technical aspects of a program do not have 'right' or 'wrong' answers. Each choice has benefits and cost or risk. Key policy questions include the following:

What are the goals for depth of affordability and overall reach? Will the program be shallow and serve many, or deep and serve few? All housing for the urban poor has an affordability gap. In the context of any given program, the poorer the recipient households, the fewer of them can be served. Need is always greatest at the pyramid's base, yet impact (both economic and political) may be greatest further up, where the emerging lower-middle-class can be boosted into market activity through smaller financial-resource increments. The case for deepest targeting is greatest need. The case for shallow targeting is most impact per expenditure.

How important are aggregate volume vs. geography of impact? Housing is place-specific. The delivery systems and value chains, which most programs depend on to function well, are scale-dependent. How we design a program for a tiny fraction of the population in a tight geography will be vastly different from what we will do if we intend to touch millions of people across a broader area. Concentration of impact also affects efficacy of impact. Touch a high percentage of the population and you will have great awareness and efficiency, but you will also significantly impact the markets (and beware the unintended consequences). Further, how the program is perceived depends on how many and who benefits, and whether the beneficiaries appear worthy, hard-working, and honest. How a program is perceived can affect its political longevity, a material consideration in program design.

What tenure range (including formality or informality) are to be supported? Housing ranges from ownership to rental, including hybrid forms, and from fully formal (including structural integrity, size, services, and reporting of financial information) to entirely informal (unregistered, unreported, ramshackle, and small). A policy case can be made for creating only fully formal housing; an equally good policy case can also be made for bringing quasi-formal or informal, if structurally promising, housing into formality. These decisions are principally political.

Is it desireable to work through demand side or supply side mechanisms? Supply-side initiatives please developers, builders, contractors and service professionals. They also deliver reliable, visible, photogenic outcomes in the intermediate term, a not-insignificant consideration in developing and sustaining a political constituency for extended funding. Demand-side initiatives speak directly to beneficiary households (voters), normally cost less per household, and please home buyers, renters, lenders, and financiers. They can be announced early and widely promoted, a not-insignificant political consideration. As a policy or effectiveness matter, the right mix of supply side and demand side resources depends on each situation and environment; it is impossible to generalize with confidence.

Who are the principal partners in implementation? To be effective, government must act through a cohort of counterparties, both public and private. Programs can be implemented privately through developers, builders, estate agents, employers, banks, retailers, lenders, mortgage originators, non-bank financial institutions (including MFIs), citizen sector organizations (CSOs), and faith-based groups. Throughout the world, each of these groups has been used as principal delivery agent in multiple countries. The choice of partners has technical considerations but is also very political. The implementing group must have breadth and capability, as well as people and intellectual infrastructure to handle the program's details and company. The partner entities will bring their own agenda(s) to the delivery. These may be harmonious with the governments' political objectives or at odds with them.

Implementing partners will also gain political visibility and power and may become an incumbent constituency that obstructs change. The choice is not to be made lightly

What types of tools are a good fit for the environment? In Section V, we have presented the basic types of housing finance tools available to government. Some are more complex than others; some require more capacity of government and its partners. Some spend more money up front; some carry more risk over time. Some are familiar, while others would be foreign introductions. Some have well-established jurisprudence and business practice; others will need more invention. The newer and less familiar a resource, the more time should be allowed for it to move to scale – and the more likely it is to have unintended consequences when it reaches scale.

VII) Crafting a Government Response: Steps in Program Design

Taking a sequential approach when developing new initiatives can help ensure that they are thoughtful, effective and can be applied with confidence and commitment.

Program development should follow this sequence:

Step 1: Make policy choices. The issues expounded in the previous section need to be resolved at an early stage. These political decisions represent the foundation on which an effective program is built. To recapitulate, the key policy decisions include:

- Will the program be shallow and serve many or deep and serve few?
- How important are aggregate volume goals vs. geography of impact?
- What tenure range is to be supported?
- Is it desirable to work through demand side or supply side mechanisms?
- Who are the principal partners in implementation?
- Which types of tools are a good fit for the environment?

Step 2: Use technical experts to tailor the program's financial structure. Programs should not be imported wholesale, nor designed from new whole cloth. Rather, a technical team should be assembled with detailed knowledge of (a) international practice (good and bad), (b) the nation's housing finance ecosystem (in great depth and with up-to-date information), (c) the nation's current marketplaces, (construction and property and capital). A program should consider the political and policy choices listed above, and utilize the appropriate delivery elements that include:

Step 3: Encorporate feedback gained from a broad stakeholder review of the proposed program. Policy makers and program designers should assemble a diverse panel of stakeholders and invite them to review the proposed program. Their feedback should be sought on whether they believe it to be workable, equitable, and worthy of support. Reviewers should understand the rules of engagement. They should understand that they are being brought in as commenters, subject to an explicit pledge of confidentiality.[7] Their comments, while valuable and to be taken seriously, are not in any way serving as a referendum on the program or even of their view on the final product. They are invited as friends of the government and should respond in kind. After the broad stakeholder review, the technical and policy team should revise the program before putting it into practice.

Step 4: Roll out a new program as a pilot, before a full launch. Pilot programs allow policy makers to test program innovations before taking the financial and political risk of wider release. Some challenges and features of a housing finance program reveal themselves only through application. The pilot phase should last long enough to allow such revelations to emerge (anywhere from 6 to 24 months depending on program innovation and complexity). Pilots should be operated differently from the anticipated full-scale program in the following ways:

[7] The information will leak, of course, so it is as well to provide a basic sketch, and to leave some areas less specified.

- *Pilots should have fewer rules, but more goals*. Pilot programs should have very clear goals, but should not specify too many procedures. Let the early implementers develop the procedures using the first few 'guinea pig' cases.
- *Staff the pilot with the highest-grade people*. Pilot programs should be administered and implemented the most competent, committed and creative team on both the public and private sides. These premium resources are worth the investment in this critical phase of research and development.
- *Start with tight focus*. Limit the rollout to a few select geographies, program participants, and/or target groups. By limiting the variables it is easier to discover program weaknesses.
- *Insist on transparency and create an atmosphere for learning*. Pilots should operate in plain view, with its results available for inspection and analysis. Pilot program participants should be open to review and critique that enhance its efficacy.
- *Expect and embrace some failures*. A pilot is meant to be an experiment or test case. If it has no failures, not much has been tested. Set participant expectations, and the budget, accordingly.

Step 5: Implement technical corrections. After the pilot phase is complete, the program can be formalized. This will normally involve some changes to legislation and many changes to regulation. Most of the changes will be purely technical. Some will be programmatic. All are worth implementing, in light of expertise, before the program is codified into permanent documentation.

Step 6: Expand the program nationwide. A successful program should expand to the limits of its ecosystem's natural border, which are usually national. Iin some cases, a state is the natural limit for a program. National expansion usually builds from a strong base of established practice and administration, with numerous successful properties and program participants.

Step 7: Create a practice of reassessment. As discussed earlier, programs inevitably obsolesce over time. However, participants/beneficiaries can become irrational defenders of programs that would benefit from revision in order to maximize efficacy and efficiency. It is rare practice, but advisable, to plan in advance for a review of existing programs.

VIII) Lessons from the Field: Recommendations for Slum Upgrading

Governments in the global south must engage in slum upgrading if they wish to address the housing needs of the poor. No matter how much is done to mitigate or prevent the growth of slums (see next section), the reality is that over a billion people already live in them. Most governments do not possess the political will or resources to completely replace these slums and most families prefer to stay in their current location. Changing the physical configuration (e.g. by going up, from shacks to mid-rises) implies more than real estate development; the socioeconomics of residents is also remade in the process, and not always for the better. Slum redevelopment into multi-storey development has proved financially challenging and has resulted in high-rise blight in most cities. However, slum redevelopment has worked in prosperous cities with highly-constrained developable areas that generate extreme land values, such as Hong Kong, Singapore, and parts of Mumbai.[8] In such contexts, government and slum residents often find redevelopment financially feasible and appealing.

Slum upgrading activities can be classified into three types: ***core basic services, tenure regularization, and comprehensive slum upgrading.*** Defining the type of upgrading activity that a government wishes to engage in is a helpful first step in choosing the right set of finance and policy interventions.

Core basic service programs involve road improvements, public illumination, communal water and sanitation systems and drainage. This approach is most common in Asian countries (e.g. Kampung Improvement Program in Indonesia) and is spreading to Sub-Saharan Africa. The World-Bank funded upgrading projects in Dar Es Salaam and Mauritania are also examples.[9] Per household costs for core

[8] See Mukhija, Vinit. 2001. "Upgrading Housing Settlements in Developing Countries; The Impact of Existing Physical Conditions" in *Cities*, Vol. 18, No. 4, pp.213-222, Pergamon Press.
[9] http://siteresources.worldbank.org/CMUDLP/.../slum_cd_sourcebook.pdf

basic service programs typically range from $250 to $1,200. These programs rarely require significant financial contributions from the beneficiaries and often depend instead on municipal finance mechanisms, subsidy or international aid. A notable exception is the Parivartan program in Ahmedabad, India where the municipal Corporation shares costs with residents.

Tenure regularization programs focus on simply achieving secure tenure, which is typically a prerequisite for upgrading. For instance, the Philippines' Community Mortgage Program extends credit to slum community associations so they can buy their underlying land directly from private owners. Costs vary widely depending on the complexity of the situation and current land ownership. Because beneficiary households receive direct economic benefit from security of tenure, there is a logical desire to share costs with residents. Household affordability is the key challenge in this regard.

Comprehensive slum upgrading programs secure tenure and improve slum communities to a level that incorporates them into the formal city and include key social services and amenities such as child care for a limited time, community centers/sports fields. They also typically include a strong participatory process. Pioneered and most developed in Brazil, this approach is common in Latin America, with Rio De Janeiro's Favela-Bairro slum upgrading project a classic example. Typical maximum cost per household of comprehensive slum upgrading in middle-income countries typically ranges from US $3,000 to $7,000.

The lessons learned in previous upgrading efforts can provide helpful insights for policy makers who wish to design their own programs.

Recommendations:

Prioritize slum upgrading efforts. National slum upgrading programs often allocate funding on the basis of population and need to all states. Within each participant jurisdiction, however, local or state government should select for investment those slums with the lowest cost, highest benefit (to residents and surrounding community) and whose residents offer the greatest counterpart. The Habitat slum upgrading program[10] of Mexico's national government achieves these goals through using an annual competition among municipalities' upgrading proposals to award funding to the best. South Africa's Department of Human Settlements reclaims and redistributes subsidies that states are unable to use within a reasonable period of time.

Facilitate transparency and community participation. Modern slum upgrading requires surveying and registering residents, organizing community savings and participation, creating a detailed plan of investment, and a transparent procurement process to select contractors.[11] This approach is replacing the practice of making public works improvements in slums mainly at election time, which has historically held a strong patronage attraction and often presents the main obstacle to local government gaining control of and guiding land use.[12] In many countries, clandestine subdividers collude with local government officials to sell raw lots without services on the urban fringe to low-income households at inflated costs. Clandestine subdivisions have become the default mechanism for most urban land development.[13] National government can combat the clientelism that fuels informal land development and piecemeal slum upgrading through educating and requiring municipalities to use standardized procedures in order to qualify for funding.

Look beyond the housing agenda. Slum upgrading changes communities, so housing is the linchpin but not the sole desirable outcome. Conversely, slum dwellers are not the sole beneficiaries: showing benefits to the middle class (e.g. lower crime, better health, reduced traffic) can be vital to unlocking resources. Colombia's Viviendas Saludables program is an excellent example. This program was born at the intersection of public health and housing policy agendas. It is funded by the national government as a public health program, aimed at improving household living conditions that have the highest impact on child health and welfare. The primarily uses of funds are for kitchen and bath improvements such as

[10] http://www.sedesol.gob.mx/index/index.php?sec=801957
[11] See Brakarz, Jose. 2002.
[12] http://www.globalurban.org/GUDMag08Vol4Iss2/MagHome.htm. See Ferguson, Bruce. "Market-Based Models for Urban Land Development and Freire, Mila et. al. *Land and Urban Policies for Poverty Reduction*. Vol. 1 and 2. World Bank and IPEA. Brasilia. 2007
[13] Ibid

cement floors, tiles, sanitation and fixtures, but also includes some structural improvements like roofs. The program is available to households making two minimum salaries or less. The maximum subsidy per household is $5,000 USD with a household contribution of $2,000 USD (savings or loan from other sources). The program is only available to residents in participating municipalities. These municipal governments are expected to contribute significant human resources to the program in the form of technical assistance and assessment capacity within the community. Vivienda Saludables is currently operating in 470 of 1,100 municipalities (42%). After only two years in operation, the program has seen rapid take-up. In the last round, 20,000 of 37,000 applications were approved (54%).

Set realistic time and expense expectations. Slum upgrading – particularly comprehensive slum upgrading – is an inherently unpredictable process, subject to disruption from physical, process/procurement, and social surprises. Slum upgrading is difficult and expensive: upgrading programs often take twice as long and cost twice as much as optimistically envisioned. Even when the actors involved (donors, national governments, municipalities, communities, construction contractors) have experience with the program, comprehensive slum upgrading takes a minimum of three years – more often 5-7 – and substantially exceeds initial budgets.

Text Box A
Factors influencing slum upgrading costs

Estimating the cost of slum upgrading requires knowledge of the unique local situation. In Rio, for example, "complex" (steep, chaotically-settled, dense, poorly drained, large) slums cost US $15,000 per household to upgrade comprehensively compared to $3,000 per household in more straightforward cases.[14] Civil engineering studies and have ranked the impact of different physical components on the cost of slum upgrading in considerable detail[15] – information that national government affordable housing/upgrading programs can usefully convey to cities and states:

Table 1 – Factors affecting slum upgrading costs per family

Network	Size of Slum (no. of families)	Topography	Situation surrouding area	Layout and location (along streams)
Water	(-)	(-)	A	(-)
Sewerage	A	(-)	A	(-)
Drainage	B	(-)	A	A
Paving	C	A	(-)	A
New housing units/extent of relocation	A	(-)	(-)	(-)

A = High influence; B = Medium; C = Low; (-) = insignificant, inconclusive, not studied

Allocate sufficient resources and maintain continuity in program operation. Worldwide, national governments invest an average of 2.3%[16] of their total expenditures on housing. The most successful models have invested a higher than average share for extended periods, all while maintaining consistent program methods and institutions. This continuity in funding and program operation allows the various actors (e.g. households, lenders, developers, community associations, government agencies) to learn their roles, develop capacity, and reach massive scale. Ample funding and continuous execution can be as important as characteristics of the program itself.

Beware often-mythical cross-subsidy. While in exceptional cases cross-subsidy can work, most times clearance and on-site redevelopment cannot generate enough funds to build and maintain the replacement housing affordable to original slum dwellers. Many countries and cities have experimented with relocating residents from the high-value land of central urban slums to multi-storey buildings on a part of the site, and use the remainder of the site for commercial development in order to cross subsidize these low-income units. This usually fails. Low-income households fall behind in their payments, lose their home-based earning opportunities originally predicated on ground-level access, and the multi-storey

[14] See Abiko et al. 2007.
[15] Ibid, P. 266
[16] http://www.imf.org/external/pubs/ft/pam/pam48/pam4805.htm

projects then turn into vertical slums (examples: Panama City, Caracas). Cross-subsidy is viable only when land values are high and the inclusionary-zoning and density bonus economics work. In Mumbai, residents have exchanged shacks on an average of 9 m² of slum land that could be sold for US $2,000 pre-development for a 28 m² unit worth as much as US $70,000 after redevelopment. Even in Mumbai, however, redevelopment may be useful for only a portion of the city's slums -- one expert notes: "Housing improvement might be more successful if the (Mumbai) government allowed projects that consisted of partial upgrading, partial redevelopment, partial resettlement, partial land readjustment, and even partial payment of housing costs by beneficiaries."[17]

Share the costs of upgrading. National state and local government and slum residents should share in the cost of upgrading. The UN recommends that slum residents pay 20% of total costs of in-situ upgrading. Very poor households, however, may be able to afford much less. Local and state government can often contribute 20-35% in the non-cash forms like land and infrastructure/urban services, or in cash resources. National government's share typically ranges around 55-60% of upgrading in situ. Experience in Diadema, Brazil modeled an equitable allocation of costs for public goods (e.g. water and sewer trunk lines) to the city and private goods (individual hookups) to the household.

Help beneficiary households do their share. Individual household savings/investment currently finances the bulk of the slum built environment. Slum dwellers capacity to pay is often discounted rather than recognized and supported. Slum residents save and invest significant sums in their home – in India, for instance, US $300 to $400 per year. Government can take specific measures to incentivize and assist individual household investment. It can fund or guarantee housing Microfinance (HMF) lenders (as in the case of Colombia's new home improvement loan guarantee decree), or through second-tier liquidity facilities (as practiced by Mexico's SHF[18]). Expanding HMF dramatically requires relatively few resources compared to other interventions (e.g. slum upgrading and new units). Although funding is important, the main challenge is to strengthen the practices and expand Microfinance Institution (MFI) capacity themselves.[19] Aided by appropriately tailor financial mechanisms, the poor can finance home improvements at an impressive rate, allowing government to focus public subsidies on infrastructure provision, securing tenure, and social programs.

Text box B
Financing slum upgrading
Favela Bairro (FB), Rio de Janeiro, Brazil

Overview
The Favela Bairro is a multi-phase program funded by an Inter-American Development Bank loan and an annual budget allocation from the city of Rio de Janeiro. Originally conceived of by the city in 1993, it aimed at upgrading 15 medium-sized favelas and irregular subdivisions, leaving larger favelas to a separate program. Its creation signified the city's realization that favelas were not a temporary phenomenon, but rather permanent settlements which needed to be incorporated into the city. IDB resources helped to grow the original program concept significantly and it has evolved over time to include more social services, in addition to hard cost projects.

To date, approximately $600 million USD have been invested in 150 communities for infrastructure, land titling, community facilities and services, and housing production. Infrastructure and community facilities make up approximately 75% of expenditures under the program, housing 16%, and social services and other soft costs 9%. Favela Bairro resources are administered directly by the city, with private sector involvement limited to contractor status. No repayment of the funds is required from beneficiary individuals or communities.

Lessons
The Favela Bairro program is a unique, locally-driven approach to slum upgrading. However, fiscal responsibility laws and federal limits on city indebtedness in Brazil have become critical for the program. The city must now prove-out its ability to repay IDB loans, and receive federal government approval of such projections. Early adulation of the program's community consultation methods have recently given way to some criticism. This may be a reflection of the fact that the program has evolved to include soft cost projects and community facilities, which allow more room for substantive participation in planning, versus more perfunctory consent for basic infrastructure improvements.

[17] A key conclusion of Mukhija, Vinit. "New Houses for Old in Mumbai: An Attractive but Problematic Solution" in *International Development Planning Review*. 2002. Vol 24(2): 161-176.
[18] http://nuevoportal.shf.gob.mx/programas/Microfinanciamiento/Paginas/default.aspx
[19] http://www.globalurban.org/GUDMag08Vol4Iss2/MagHome.htm. See Ferguson, Bruce. "Housing Microfinance; Is the Glass Half Empty or Half Full?" 2008.

Text box C
Housing Microfinance
MiBanco in Peru and the Kuyasa Fund in South Africa

Household savings can leverage a series of small home improvement loans to fund the progressive housing process. Over the last decade, housing microfinance has grown rapidly but from a small volume and institutional base. While HMF has developed most completely in a few Latin American countries (e.g. Peru, Guatemala, Bolivia), this practice holds particular promise for Africa[20] and South Asia.

MiBanco, the largest microfinance bank in Latin America and one of the largest banks in Peru, launched its housing microfinance product, MiCasa, in 2000. Credits, averaging US $1,600, are extended for up to five years at interest rates of 48%/annum[21] for home improvement, expansion, and construction. MiCasa has grown rapidly. As of April 2007, MiCasa had 20,903 loans outstanding in total, and was making new loans at the rate of US $2.5 million per month. This program supports households in the construction process through an initial design and budget, one visit at the start of construction to help orient the work, and a technical report on the feasibility of construction. MiCasa extends credit, and collects repayment through its network of loan officers, each of whom manages a portfolio of around 250 loans and gets paid largely on commission based on loan origination and collection performance. Only about 10% of MiCasa loans are secured by mortgages. Loans are instead secured by cosigners, personal collateral, and temporarily taking custody of households' proofs of ownership until credits are paid off. Assiduous methods of loan collection and maintaining good credit in order to get access to more finance constitute the main incentives for repayment. Arrears exceeding 30 days were 1.81% -- low by Peruvian and international standards. Return on equity was 7% to 9% per annum and return on assets over 20% per year. MiBanco's success with HMF has stimulated many of Peru's local and provincial savings and loans ("Cajas") and microfinance institutions (EDYPYMES) to expand low/moderate-income home lending. The Inter-American Development is preparing a 2009 US $20 million program to fund the most experienced Cajas and EDYPMES to extend small mortgage credits. This increasing competition has begun to drive down interest rates on HMF loans and stimulate new products that join HMF with other services and goods useful to progressive homebuilders.

The Kuyasa Fund, a South African NGO, extends credits averaging US $750 to low-income households (earning up to $440/mo; 74% headed by women) that have received a basic (23 square meters) structure under government's housing subsidy program to expand – in some cases more than double – their unit. In its 8 years of operation, the Kuyasa Fund has extended $6.9 million in housing credit to over 9,000 families, with a current loan balance of $2 million. The Kuyasa Fund portfolio has performed well compared with some other efforts at HMF in South Africa that suffered from poor underwriting and collection, and moral hazard.

Assign administrative roles appropriately. National government should provide the bulk of cash subsidies for slum upgrading and establish national housing credit finance systems that facilitate finance on market terms. National government should also help to develop municipal capacity to procure services and operate upgrading programs, as well as plan proactively to reduce slum formation. Municipalities should execute slum upgrading projects, play an important role in new low-income land and affordable housing development in collaboration with private developers, and maintain and service these areas. Even if municipal capacity is low at the beginning, its political accountability will compel a rapid increase in that capacity. The early failures should be seen as startup costs of strengthening local government, a goal worthwhile in itself.

Involve the private sector - wisely. Government can leverage its limited resources by forming public-private partnerships. Increasingly, the private sector (for-profit and nonprofit) is recognizing the volume of demand[22] and hence profitability of offering affordable housing products and services in emerging countries. However, government should be careful to structure private sector involvement carefully. Rather than relieving the public sector of responsibility, public-private partnerships require clear roles judicious allocation of resources, consistent application of regulation, fair compensation and risk distribution.

[20] Kihato, Michael. *Scoping the Demand for Housing Microfinance in Africa.* SBC Consulting FINMARK, South Africa. 2009.
[21] As of June 2007, with inflation running at 1.5%.
[22] http://www.globalurban.org/GUDMag08Vol4Iss2/MagHome.htm. .See Hammond, Allen; William J. Kramer, Rob Katz, Julia Tran, Courtland Walker. "The Next 4 Billion – The Housing Market." 2008.

Text box D
Private sector and housing at the "base of the pyramid"

The profitability of serving low-income populations is being recognized across the board in housing and finance industry. What the base of the pyramid lacks in individual buying power, it makes up for in volume – volume of tiles sold, loans made or savings accounts opened.

Recognizing that half of its Mexican cement sales go to self-help progressive homebuilders, CEMEX (one of the 3 largest global cement manufacturers) studied how to enhance its brand in this market. The resulting program, Patrimonio Hoy[23], organizes regular savings of small groups of households, delivers a package of building materials for a significant home improvement (e.g. a room addition) in stages that households pay for in installments. The program provides construction planning and technical assistance through community offices staffed by a manager, an architect, and an accountant. Participants upgrade their homes in 12-18 months rather than 16 years (the median period for progressive housing in Mexico) at a cost of 30% less. Patrimonio Hoy has assisted 1 million Mexicans. CEMEX has expanded this program to other countries and now offers credit to low-income neighborhoods to pave roads. As with public-sector slum upgrading efforts, CEMEX has found that reaching massive scale depends critically on community organizations and networks to market, monitor performance, screen households and groups for participation, and collect on individual and group loans. Similarly, the Colombian company Colceramica created a program called "Paso a paso", which offers a specially-conceived product line through local promotoras, who counsel clients and sell the products in the clients' home. This door-step approach to sales soon came to include a vendor-funded financing feature.

This down-market migration presents new challenges to government as it expands the definition of public-private partnership in the context of housing. It is no longer limited to private sector developers as contracted or regulated producers and managers of housing (a relatively clean role with clear monitoring and compliance benchmarks). Instead, when government attempts to encourage private sector manufacturing and financial companies to move down the pyramid, special caution must be taken not to inadvertently distort the larger markets or encourage over-aggressive and risky behavior. In these areas it is more difficult to predict the implications of government incentives and regulation.

Avoid direct lending and government guarantees whenever possible. Direct lending by government agencies, or the provision of direct guarantees of household debt, usually result in high rates of arrears and non-payment. These "loans" amount to grants-in-disguise, as beneficiaries consider these as entitlements from government. Even when financial institutions are subsidized to make below-market rate loans to households, many problems arise. Subsidized interest rates on mortgage finance exclude a large part of the population that cannot qualify for, or does not want, a mortgage. This form of subsidy also increases with loan size, and is regressive. Mixing subsidies with credit finance hinders the private finance sector from developing systems to serve working low-income and lower-middle income families. Subsidized interest rates are often offered exclusively by public housing banks, which are typically less efficient than private institutions. The subsidy amount varies with market interest rates and cannot be budgeted upfront. Although relatively easy to design and implement, finance-based subsidies have produced many disasters for these reasons.

Create a national housing agency and plan. A wide range of housing and housing finance and policy agencies tend to emerge at the local, state/regional, and national level. However, the creation of a strong National Housing Agency or Ministry with direct access to the national executive is often essential to address the immense challenge posed by low-income settlement. Such an agency can provide sustained analysis, ensure budgetary commitment, resolve inter-agency turf wars, and create and carry out a National Housing Plan. In 2001-02, Mexico created such an agency (CONAFOVI) and plan[24], which has contributed to tripling the volume of mortgage finance and formal-sector affordable housing development.

[23] www.wdi.umich.edu/files/Conferences/2007/BoP/.../CEMEX.pdf
[24] http://www.conafovi.gob.mx/programa_vivienda.html

IX) Lessons from the Field: Recommendations for Slum Prevention / Mitigation

Slum mitigation must be seen as a complement to slum upgrading, not a substitute for it. In most cities in the global South, slums cannot be wholly prevented. However, some parts of the city can be prevented from becoming slums, and other rapidly developing areas can have their slum externalities mitigated. Because this activity is fairly expensive, it often benefits middle-income households more directly than poor households. Mindful planning and strategic investment can have far-reaching impact; improving parts of the city to strengthen the whole city. Global experience in urban expansion activities can provide valuable lessons to growing cities.

Recommendations:

Match supply-side subsidies to a shortage of houses, demand-side to a shortage of house-buying power. Supply-side subsidies are linked to the Project and controlled by the organizations that build, (developers) or finance (financial institutions) those projects. These subsidies can get projects built quickly, but clear quality expectations and corresponding incentives/compensation are critical. On the demand side, portable resources empower customers and generate a second-order marketplace response, so making sure that the customer is in fact able to make an informed market choice is critical.

The Chilean system of portable vouchers for homeownership is an example that serves largely moderate and middle-income households. The government distributes these subsidies through a point system that favors need (lower incomes, poorer existing housing condition) and effort (length of and amount of household savings). Households combine this grant with their savings and a market-rate mortgage to purchase a new home in a wide range of eligible projects. Since its inception 30 years ago, continuous funding and consistent operation have resulted in production levels exceeding new demand that have contributed decisively to preventing new slum formation in Chile.[25] The concept of direct-demand subsidies has spread to many other Latin American countries, but usually without the continuous funding, careful design, high administrative capacity, and steady operation over decades that made for success in Chile.

Demand-side subsidies go to individual households or community associations and are therefore usually more complex to establish and administer at scale. However, they are generally very effective at aligning the housing product with household preferences (i.e. better construction quality and location.) In general, direct-demand subsidies have worked well for middle-income households, but not for the working poor.[26] In practice, housing programs usually mix supply-side and demand-side subsidies.

Use government risk-tolerance at the margin to push national housing finance vehicles down-market to reach the growing lower middle class, and reserve subsidies for low-income families. Various middle-income developing countries have created housing finance funds at the federal/national level. These can, in some cases, account for the bulk of mortgage lending (80%+) and drive the home-building industry or fuel economic recovery. These national housing finance vehicles usually come in two types: ***provident/housing funds and second-tier liquidity facilities.***

Provident/housing funds (i.e. Social Security or pension) impose a payroll surtax on one group to create a housing-affordability fund for that group or a different group. Credit is offered for new project development (short-term construction loans to the developer and long-term loans to purchase the unit by households) or to contributing households. These loans typically carry below-market interest rates and may offer more deeply discounted rates to those with lowest incomes. Less frequently, individuals who contributed to these funds can access them for individual construction and improvement of their own home. Countries with provident/housing funds (or similar) include much of Latin America (e.g. Mexico, Peru, Venezuela), Jamaica, and China.

[25] http://eau.sagepub.com/cgi/content/abstract/7/2/31

[26] For a comparison of direct demand subsidies across Latin American countries, see Ferguson, Bruce, Jacbo Rubinstein, and Vicente Dominguez Vial. (1996). The Design of Direct Subsidy Housing Programs in Latin America, *Review of Urban and Regional Development Studies*, (8), pp. 202-219. United Nations Regional Development Program, Tokyo.

Text box E
Provident / Housing Funds
Two Examples from Brazil and Philippines

Fundo de Garantia por Tempo de Servico (FGTS), Brazil
Brazil's, Fundo de Garantia por Tempo de Servico (FGTS) was created in 1966. It requires contributions from formal-sector employers equal to 8% of payroll, without direct employee contribution. In 1968, FGTS first started to make housing loans through the now defunct Banco Nacional de Habitacao, but this activity was suspended in 1986 due to high defaults in the context of hyperinflation. In 1990, FTGS recommenced housing investment. The Ministry of Cities – a federal agency - and the Caixa Economica Federal (CEF) – a government-owned bank - now offer five FGTS-funded housing loan programs. Activities must serve households earning less than seven minimum wages and include; 1) loans to individual households for lot acquisition, purchase of new and existing units and building materials, 2) loans to Community Associations for purchase of lots and construction of new units 3) loans to private-sector developers for new construction of rent-to-own units, 4) loans to private-sector developers to construction homeownership units, 5) loans to states or cities for construction of social housing.

Individual home loans make up the greatest share of FGTS housing activities (averaging 69% of all lending in '06-'08). However this share is dropping consistently and a greater percentage is being lent to large-scale housing production activities of the public sector. Within the individual mortgage lending activities, the trend is toward fewer, larger loans. This is partially the result of government goal to increase the proportion of new development to 50% of activities. Average individual loan size went from R$15,409 in 2006 to R$35,317 in 2008. The overall amount of FGTS investment in housing is reconsidered each year. Between 2006 and 2008, FGTS housing investment grew from R$6.476m to R$10.261m (growth of 37%), with2009 investment expected to jump to R$19. billion, as part of a deliberate economic recovery/growth strategy. FGTS housing loans are available to benefit any low-income citizen, even if they are not enrolled in the pension program.

Pag–IBIG in Philippines
From its inception in 1978, Pagtutulungan sa Kinabukasan: Ikaw, Bangko, Industria at Gobyerno (Pag-IBIG) was designed to serve a dual purpose of establishing mandatory savings and financing affordable shelter. Pag-IBIG requires formally-employed workers with incomes over 4,000 pesos month ($85 USD) to contribute 1% to 2% of their salary to the fund. Their employers must pay an additional 2%, with a cap of 5,000 pesos annually ($108 USD). Pag-IBIG offers below-market financing to individual households to acquire or improve their homes. The average individual home loan in 2007 was 475,000 pesos ($10,275 USD). These loans are available to vested contributors (24 months) without regard to income. Pag-IBIG also makes loans to private-sector developers to construct units for occupancy by Pag-IBIG contributors. Individual loans make up 91% [27] of 2009 lending whereas developer financing is only 9% of the portfolio. The absolute amount of Pag-IBIG housing lending during the first 11 months of '09 was 44.91 billion pesos ($971.45m USD). 10 to 1 leverage limit.

The structure and use of the Brazilian and Philippine provident/housing funds reflect two distinct orientations. The Brazilian model operates as a de-facto payroll tax, and has been criticized for contributing to the phenomenon of informal employment. It is redistributive in nature, as its loan products benefit low-income populations universally (contributors and non-contributors), but not higher income households who contribute significantly to the fund. It is an effective tool for a social policy goal. By contrast, the Philippine model benefits all contributors, regardless of income and requires explicit participation by individuals. This reflects its goal of promoting a personal savings ethic.

Liquidity facilities have the goal of developing or strengthening a housing finance system. When new originators develop a book of business, they can develop a liquidity problem because their assets (their loan pools) lack the seasoning or track record to give the debt markets sufficient confidence to buy resale securities. Government can intercede through the creation of an intermediate lender, securitizer, or guarantor, in effect providing some level of credit enhancement into the debt markets and enabling the resulting liquidity to flow back into the primary originators. Countries with second-tier liquidity facilities include Malaysia (Cagamas), Mexico (Sociedad Hipotecaria Federal), India (National Housing Bank), and Hong Kong (SAR).

[27] 19% made up of oversees workers

In addition to lending, national housing finance vehicles can supervise participating first-tier home lenders[28] in hopes of discouraging the poor underwriting, extreme leverage, and perverse incentives that fueled the subprime mortgage debacle in the US[29]. In Mexico, SHF has overseen and effectively created a rapidly growing industry of mortgage bankers dependent on SHF for the great bulk of their funding. The good performance (low arrears, profits, rapidly growing volume) of these mortgage banks has now attracted commercial banks that fled mortgage lending after the Peso Crisis of 1994 back into the business.

Employ a multi-pronged effort to control land price volatility and preserve affordable urban land. The high cost and scarcity of appropriate land presents the biggest challenge to affordable housing development.[30] Paradoxically, an impaired land market – resulting from informal, unclear, or communal land ownership – can initially lower land cost and enable the poor to begin progressive housing. Regularizing land title, while generally seen as a positive step, can have the undesirable consequence of pricing the poor out of their informally-affordable housing. This impacts not only the poor but higher income households as well, which can then divert government subsidy from households with highest need (the poor) to those with more voice (the middle class). In this context, governments are well-advised to develop a multi-pronged strategy to constrain urban land prices. A variety of methods have met with success, depending greatly on legal, cultural and land ownership environments. Some mechanisms include:

- *A progressive urban real property tax* applied to parcels on the urban fringe.[31] When land is taxed based on its potential development value (rather than its current use), the resulting taxes not only provide funding for urban services (75% of municipal revenues in the US), but also create strong incentives to develop rather than hoard urban land[32]. Developed countries collect 1-2% of the value of urban property per annum, and emerging country cities should aim for this level. Conversely, when property taxes are low and collection uneven, landowners have very low carrying costs, and urban land concentration/mafias form. Many government agencies also own developable parcels in and around cities. As a result, urban land prices in the largest cities of dynamic emerging countries (e.g. Mumbai, New Delhi, Shanghai) have reached surrealistic levels virtually unrelated to their value in housing development. As an example, peri-urban agricultural land in Faridibad adjacent to New Delhi sells for US $250,000 per acre, twenty times the price in New Jersey, forty times the California price.[33]

- *Eminent domain* (also known as compulsory purchase) laws that allow government to purchase land at pre-speculative prices for affordable housing development present a direct but often controversial solution to this problem, as discussed in Section 2.1 above.

- *Mandatory land pooling/readjustment* on the urban fringe (widespread in South Korea and Japan) requires landowners to contribute their property and associate with government in large-scale development projects. Owners receive a share of the profits of these projects in proportion to the value of their contributions.

- *Inclusionary zoning*, discussed in Section 2.2 above, requires developers to build or fund a certain share of projects as affordable housing – and density bonuses for projects that include affordable housing have worked well in strong regulatory environments (the US, and the largest cities of India and the Philippines) but suffer from uneven implementation or are absent in other emerging countries. Government can require the development of specific areas within a limited time period -- forcing landowners to use it, sell it to others who will (putting downward pressure on price), or have the land

[28] Although joining lending and regulation functions in one organization theoretically creates conflicting missions, the expertise and knowledge necessary to perform both roles well often resides in only one institution and mission conflicts can sometimes be managed.
[29] Unfortunately, the 2008 collapse of Fannie Mae and Freddie Mac, fueled in material part by their purchases of subprime securities in 2007, also shows that too much secondary-market liquidity and implicit credit subsidy is prone to the very same overleverage, agency risk, and moral hazard.
[30] See Freire, Mila et. al. 2007.
[31] Ibid.
[32] An extreme counterexample – that is, the cost of taxing land differentially based on current use rather than development value – is Japan's extreme misallocation of urban land because it is agricultural (micro rice paddies and the like), creating not only inefficient land use but a political constituency with a stranglehold on the issue.
[33] Freire, op cit.

expropriated by government at the end of the time period. Constraining urban land prices requires joining an effective property tax with one or more of these other methods.

In contrast, legal ceilings on the total amount of land owned by individuals or companies, extensive land purchase and banking by the public sector, and direct taxes on the appreciation in private real estate stimulated by public investment have usually failed to produce good results.

Employ a wide range of tenure and product types in new development. This includes rental, various types of secure tenure short of full legal title, long-term leases, and land trusts. As most governments lack the budget to subsidize complete units for the entire target population, meeting affordable housing needs at massive scale requires financing a wide variety of low-cost housing solutions and mixing progressive development with developer-built, mortgage-financed units. The homeownership options include serviced sites, home improvement and expansion, construction of a core unit on a lot owned by the family or on government land, purchase of developer-built core expandable units, the small units in low rise walk-up multifamily buildings, and – more controversially -- nano units in high-rises. Affordable housing programs should include a spectrum of tenure types beyond full legal title for homeownership, including public rental, private rental, long-term land leases, land trusts, No Eviction Guarantees, and other forms of secure intermediate title.

Require proactive planning for new low-income land and housing development. National government programs must combat the local bias and financial incentives that discourage guiding low-income settlement and progressive development. To this end, national government can require municipalities to create a city development strategy that provides a vision shared by public and private stakeholders for the next 15 to 20 years.[34] This should include a land budget, a housing needs assessment and a regulatory audit.

Informed by such analysis, an effective city development strategy can better employ planning and non-cash mechanisms like Floor Area Ratios, Transfer of Development Rights, urban boundaries – to encourage guide low-income housing development. If local government is unwilling or unable to adopt such practice, national governments can still intervene both directly (through zoning overrides) and indirectly (through changes in funding levels based on municipal response[35]). In Colombia, the national government has allowed zoning overrides for large-scale low-income housing developments under its Macro Proyectos program.

Text box F
City development plans
Recommended elements

Municipalities should engage in planning with the benefit of insight from various stakeholders and with the goal of setting course for 15 to 20 years. Important elements include:

- A land budget which estimates: **demand for land** for housing, commerce, and industry; **density levels** for specific types of housing/land uses; **requirements for communal facilities** such as schools and clinics; **topography,** slopes, load-bearing and vulnerability to flooding; and **measures to increase access to land** including public transport, location of economic activities/employment, and physical and social infrastructure.

- A housing needs assessment which estimates: the rate and scale of **new household formation** (total anticipated population increase/average household size); **pent-up demand** (including replacement of fully depreciated units unsuited to rehabilitation, the number of over-crowded households, nd the number of deficient units that can be repaired).

- A regulatory audit which analyzes current development/building standards and modifies them. Examples of adaptive measures include: reducing right-of-way to the minimum for safe circulation; setting service standards at levels deemed adequate by population rather than consumption levels in affluent countries, encouraging mixed land-use that supports home-based employment.

[34] http://siteresources.worldbank.org/CMUDLP/.../slum_cd_sourcebook.pdf
[35] In the late 1960's, HUD explicitly used granting or withholding of Federal money as leverage to compel municipalities to embrace Operation Breakthrough slum redevelopment. US states routinely adjust their revenue-sharing allotments based on municipalities' performance in affordable housing delivery or preservation.

Create polycentric cities and connect new development to employment centers with public transport. Proximity to work and economic opportunity is a major factor for locational choice and cost of housing. This has been well documented in developed countries where the aggregate cost of housing-plus-transportation is a constant[36]. This means that more affordable housing occurs in locations where transportation expenses are higher. In the US, this is often said as "drive 'til you qualify."

Allowing a large metro area to develop around one center has had devastating results for megacities[37]. Similarly, failure to accommodate traffic demands creates severe congestion and represents a practical limit to urban expansion. Dedicated bus lanes with frequent, round-the-clock service have transformed Curitiba and Bogota, cut commute times, improved quality of life, and opened up large new areas to development. The planning and development of new residential projects[38] can also include transport arrangements that allow reaching employment and service centers in a reasonable period of time.

Be opportunistic in converting marketplace fluctuations into long-term affordability. As countries develop, moments arise where household income outstrips housing costs (and hence housing affordability) for a time. Examples include the US (1950s), China (1990s), and India currently. At such moments, some housing development can occur at market rates without subsidies, in particular for the lower middle class. Taking advantage of these opportunities requires rapid response and as such, public-private partnerships are crucial. Governments' task is to ensure that the bargain element is passed on to the consumer, and not simply contributing to the developer's profit margin.

For instance, in Mumbai's TM City, a private developer, assisted by government in acquiring an appropriate site, is building a 25,000-unit community with full urban, social (schools and clinics), and commercial services for the working poor and lower middle-class. Units range in price from US $6,000 (affordable to households making US $100-200/month with a 30-40% down payment) to $14,000 (affordable to the lower middle class). The developer received 60,000+ applications for the first 3,000 units delivered in 2008 and plans to build the remaining houses by the end of 2010. The developer assists public-sector loan originators to handle the large application volume and has arranged for good transport connections to central Mumbai.[39]

Private sector overbuilding can have similar consequences, resulting in a price crash. Even as government rushes to prop up financial institutions or otherwise create institutional liquidity, it can capture a portion of these suddenly-affordable plots and properties for long-term affordability. In the US, the 1990 savings and loan (S&L) bailout led to the RTC's Affordable Housing Program; with the current global real estate crisis, similar concepts are being actively mooted in the US, UK, and Ireland.

X) Lessons from the Field: Final Thoughts

Governments must engage in the financing of housing generally, and slum upgrading more specifically, if they wish to address the housing needs of the poor. All of the finance tools explored in this note could conceivably be applied to the task, but while crafting the right finance tool is essential, the approach to program design and implementation is equally important for success.

Governments cannot address the housing needs of the poor as a lone actor. The most successful housing and finance interventions involve municipal governments in partnership with higher levels of government and with the private sector. The poor themselves should also be considered valuable counterparties in the endeavor. Clarity of roles and responsibilities (financial and otherwise), among the actors is key to effective partnerships. Collaboration will benefit all of the parties involved by sharing risk, effort and expense. However, such collaboration requires a significant commitment of resources and investment of time. While this collaborative approach may seem impractical in the face of urgent housing need, it is critical to positive physical, social and economic results.

[36] The US's National Housing Conference Center for Housing Policy has produced definitive research demonstrating this correlation throughout the US.
[37] See Laquian, Aprodicio. *Beyond Metropolis; the Planning and Governance of Asia's Mega-Urban Regions.* Woodrow Wilson Center Press. Washington, D.C. 2005.
[38] Such as the transport connections to the TM City project on the outskirts of Mumbai. See "TMC presentation to UN Habitat", Delhi, July 7, 2009.
[39] "TMC presentation to UN Habitat", Delhi, July 7, 2009.