

1st Asia-Pacific Housing Conference: Making Housing Affordable, Inclusive, and Resilient
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Innovations in Measuring Affordability and Boosting Private Supply of Affordable Housing

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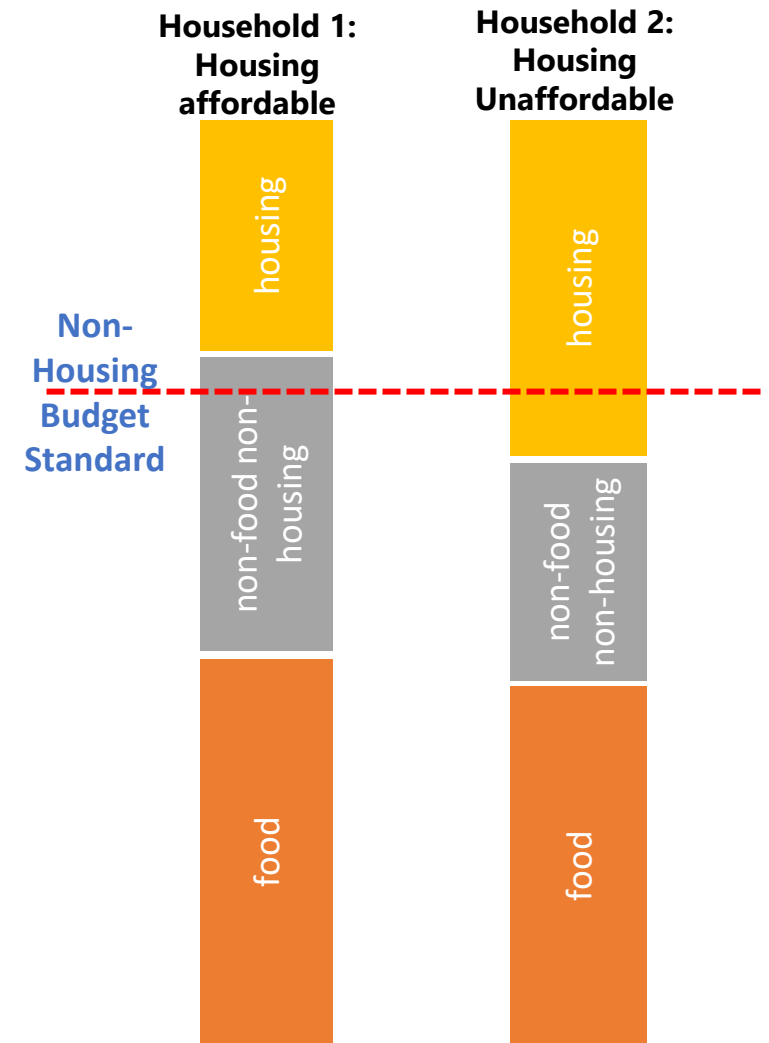


Measuring Affordability



Measuring Affordability

- Expenditure-to-Income Ratio (EIR) method
 - the 30% rule of thumb is widely used in developed and developing world, *but has not been backed by empirical evidence*
- Residual Income Method (RIM) shows a much more nuanced picture of affordability. However
 - Non-housing budget standard?
 - Income data is often not collected or not reliable
- Innovation: Modified RIM – Residual Expenditure Method (REM) is to the rescue



Building Blocks of REM

Measuring Affordability

- Pakistan case:

	Residual Expenditure Method (%)	Ratio Unaffordability (%)
Pakistan	25.2	43.9
Q1 (lowest)	93.7	28.1
Q2	29.3	35.6
Q3	2.6	44.3
Q4	0.6	52.0
Q5 (highest)	0	59.6

Note: Sample restricted to urban areas only.
Source: Authors' calculations based HIES 2018-19 microdata.

REM indicates housing affordability problems mainly lie in the bottom 40%

Expenditure-to-Income Ratio (EIR)

- *overestimate the payment capacity of Q1*
- *underestimate the payment capacity of Q2-Q5*

Measuring Affordability

Naya Pakistan Housing Program
Tier 1 unit
 Max loan amount: PKR 2.7 million

Mortgage Parameters

Total price of the units (PKR)	3,000,000
Mortgage Interest Rate	12%
Tenor	20
Down payment @ 10%	300,000
Loan Amount	2,700,000
Monthly payment	29,729

Monthly payment @30% of HH Income			
	30% of HH Income (mean)	Monthly subsidies required (mean)	Subsidy as % of cost
Q1	7,588	22,141	74%
Q2	8,901	20,828	70%
Q3	9,868	19,861	67%
Q4	11,772	17,958	60%
Q5	20,999	8,730	29%

Ratio approach suggests even the top quintile needs to be subsidized

In fact, they can pay more than 30% of their income for housing. Should not be eligible for subsidy.

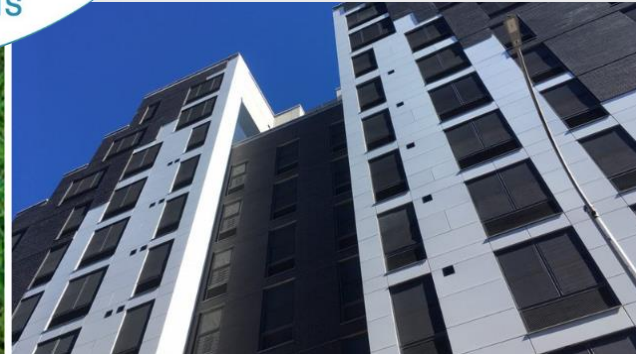
Boosting Private Supply of Affordable Housing





Tamil Nadu Shelter Fund

A unique Impact fund for Affordable, Green and Sustainable Housing in the Public, PPP and Private sector



Tamil Nadu Infrastructure Finance and Management Corporation (TNIFMC)

Institutionalizing the Public Private Partnership

Structured to operate as a private enterprise

Has a Board, with representation from the GoTN, key stakeholders, and Independent Directors

Has a well-structured investment process

Staffed by qualified investment professionals

TNIFMC manages the following Alternative Investment Funds (registered with SEBI)

Infrastructure funds
Invests in securities of infrastructure projects

TNIF - Tamil Nadu Infrastructure Fund
USD 1 Billion (Fund raise in progress)

Social Venture Funds
Undertake social impact investing

TNSF - Tamil Nadu Shelter Fund
USD 500 Million (Raised USD 92 Million)

Venture Capital Funds
Invests in start-ups or entities

TNESSF - Tamil Nadu Emerging Sector Seed Fund
USD 70 Million



Key Features of Tamil Nadu Shelter Fund

Provide an initial equity contribution to TNSF to mobilize additional external financing.

TNSF expected to act as a market maker to increase access to affordable housing through the financing of mixed-income and mix-use developments where middle-income units cross-subsidize low-income units.

Structure and co-finance eligible private or PPP projects that address the needs of EWS, LIG, and MIG that are commercially viable through cross-subsidization but not sufficiently attractive to the current housing developers.

Expected to reduce the perceived risk and to ultimately contribute to a robust supply of affordable housing which can substitute/complement highly subsidized publicly provided units in the long run.

TNSF's hurdle rate is 6 percent. Its target IRR is 12 percent, significantly lower than the IRR required by PE investors in the market.

TNSF Investment as of August 2022

	Private Sector	Public Sector/PPP
Committed	\$ 12 million	\$ 2 million
Pipeline	\$ 33 million	\$ 12 million
Total	\$ 45 million	\$ 14 million

India Housing Needs and Solutions by Income Segments

Home Ownership

Market housing
w/o support

Market frontier
w/ tailored support
(e.g., de-risking)

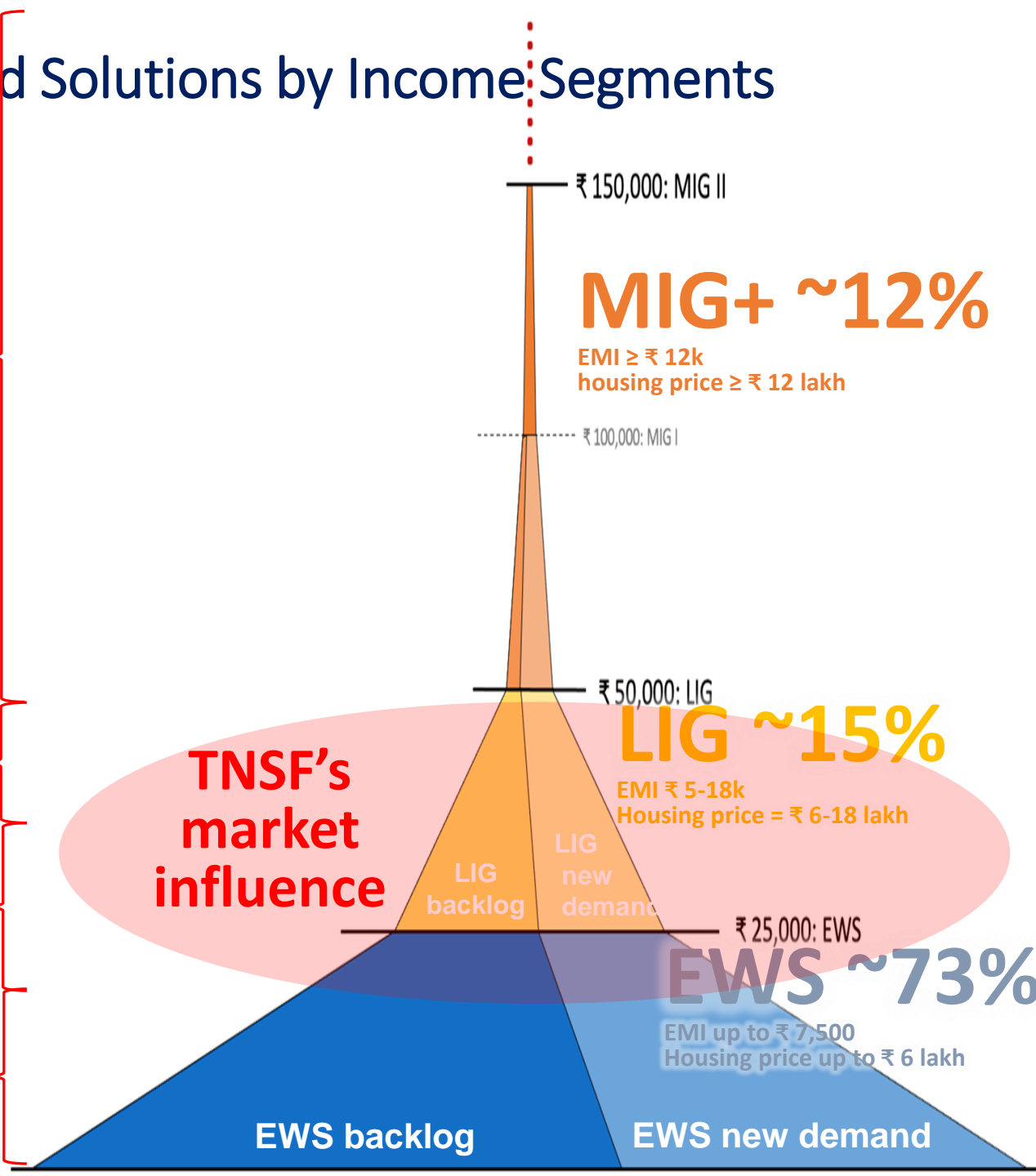
Market-making
public housing
w/ large beneficiary
contribution

Public housing
highly subsidized
(to Poor & Vulnerable)
Bottom 40% / SDG 10

Rental, Lease,
Lease-to-Own

Rental housing
w/o support

Market solution
w/ differentiated
support



EWS backlog

EWS new demand

**TNSF's
market
influence**

LIG
backlog

LIG
new
demand

EWS ~73%

EMI up to ₹ 7,500
Housing price up to ₹ 6 lakh

LIG ~15%

EMI ₹ 5-18k
Housing price = ₹ 6-18 lakh

₹ 50,000: LIG

₹ 100,000: MIG I

₹ 150,000: MIG II

MIG+ ~12%

EMI ≥ ₹ 12k
housing price ≥ ₹ 12 lakh

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