



# Derisking Energy Efficiency Investment

Key concepts and practical applications from UNDP's support to developing countries

Sixth International Forum on Energy for Sustainable Development  
Yerevan, Armenia  
Tuesday 29 September 2015

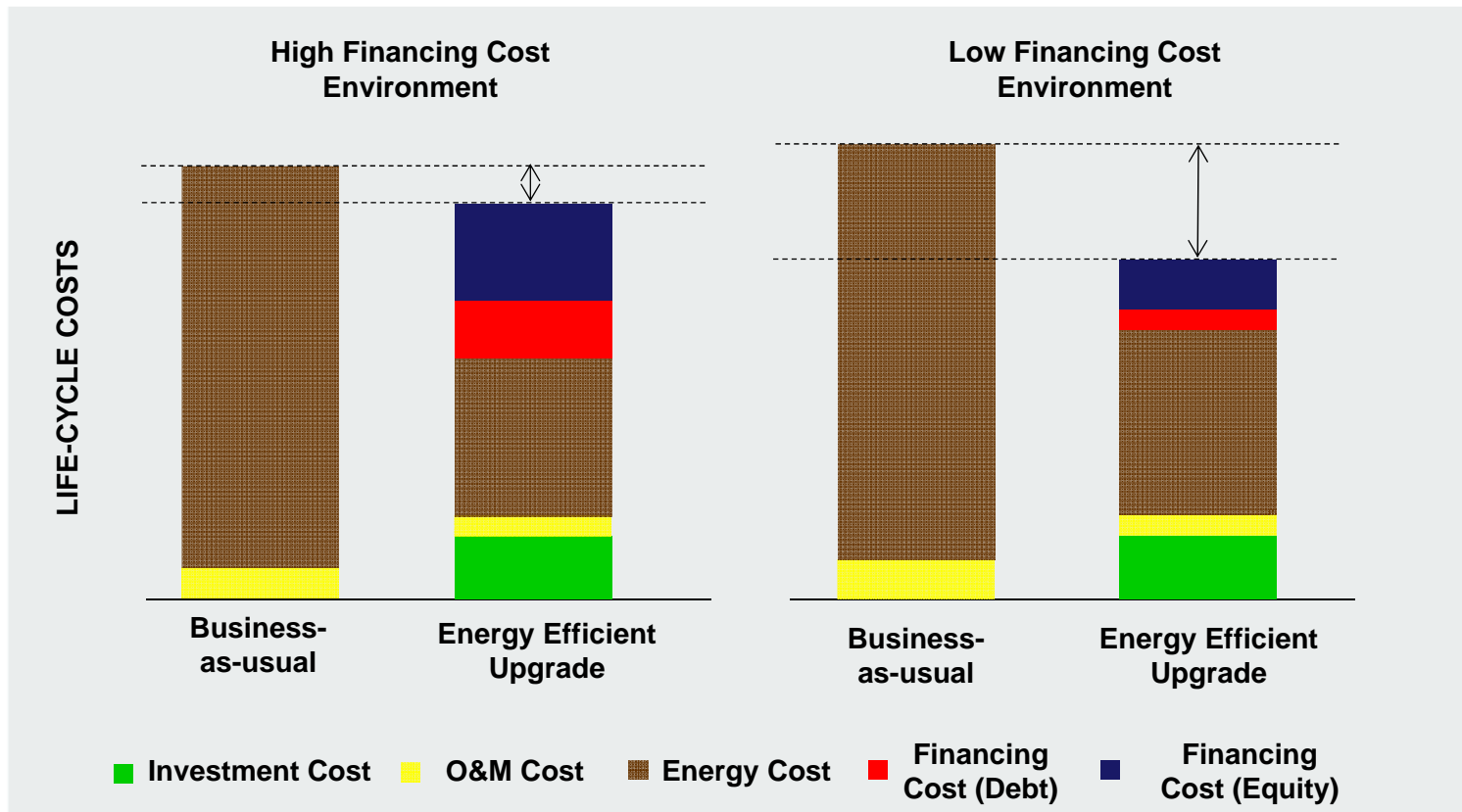


# Derisking energy efficiency investments

## Objective: access to abundant, low-cost financing



A key characteristic of energy efficient investments are their high upfront capital intensity, and therefore their sensitivity to financing costs. Access to large quantities of low-cost financing will be critical to cost-effectively transform energy efficient markets.

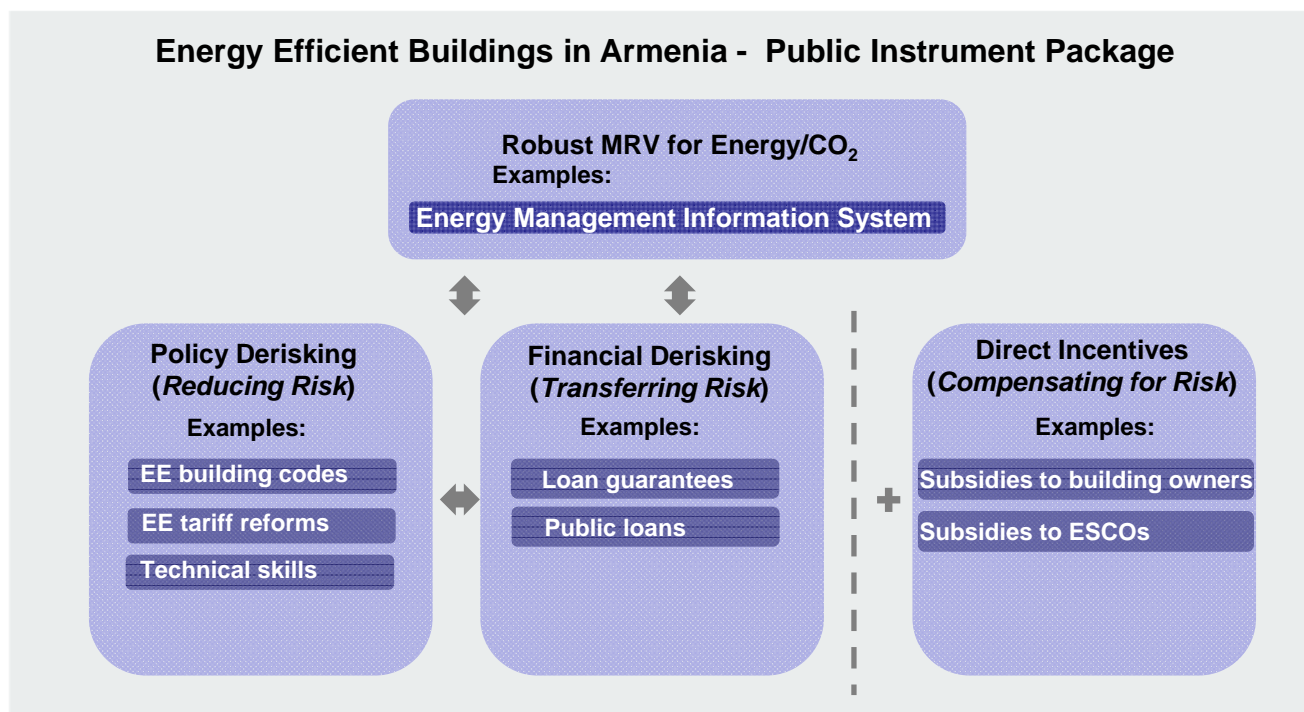


# Derisking energy efficiency investments

## Addressing the risk/return of investments

Public instrument packages that most cost-effectively:

- (i) Address the non-financial (often behavioral) barriers that block demand for investment
- (ii) Create attractive risk/return profiles by *reducing, transferring or compensating* for risk

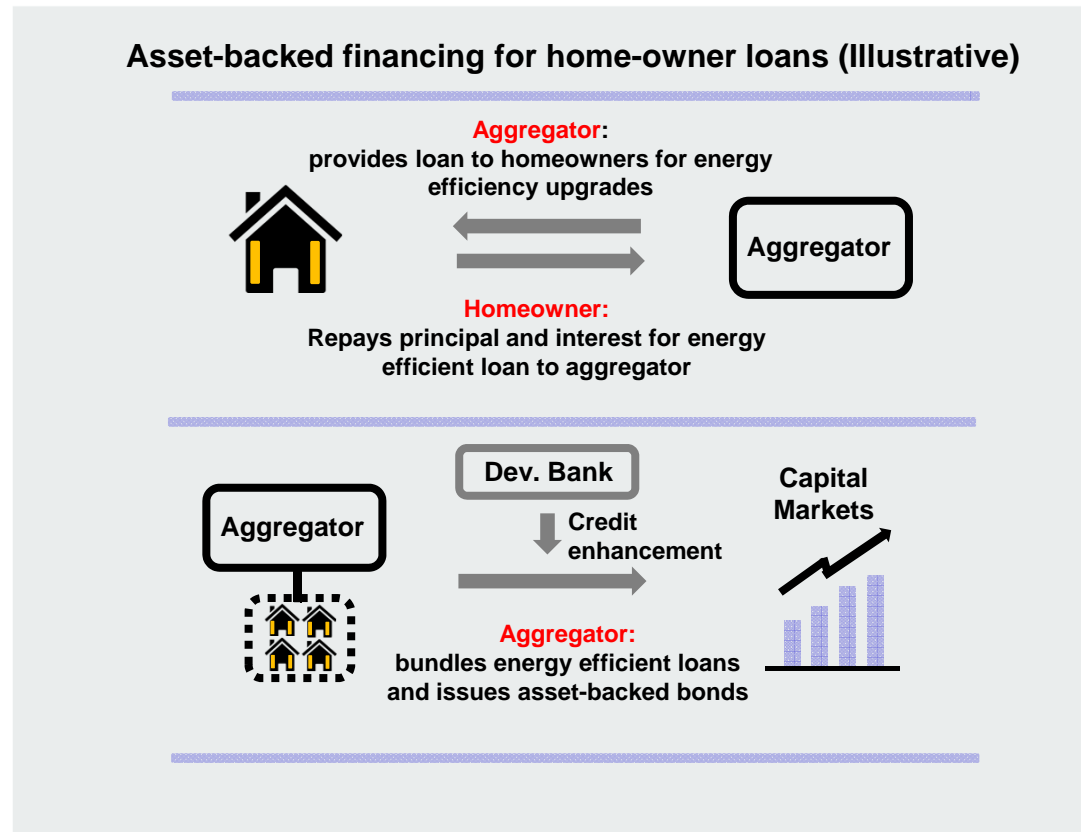


Source: UNDP, *Derisking Renewable Energy Investment* (2013), adapted.

# Aggregating energy efficient investments

## Uzbekistan: green mortgages

The opportunity is to promote business models and financial products which allow aggregators (municipalities, utilities, retail banks, ESCOs) to access low-cost forms of capital, with the ultimate objective of tapping the bond capital markets






# Aggregating energy efficient investments

## Uzbekistan: green mortgages



**Preliminary Estimates**

	 <b>Standard Rural Home</b>	 <b>“Energy Efficient” Rural Home</b>	 <b>“Low Carbon” Rural Home</b>
<b>Home Value</b>	\$70,027	\$71,817	\$73,807
<b>Incremental Cost of Green Improvements</b>	-	\$1,790	\$3,780
<b>Downpayment</b>	\$21,206 (30%)	\$21,666 (30%)	\$22,266 (30%)
<b>Mortgage Size</b>	\$48,902 (70%)	\$50,152 (70%)	\$51,541 (70%)
<b>Interest Rate</b>	7.00%	6.75%	6.625%
<b>Mortgage Term (Yrs)</b>	15 yrs	15 yrs	15yrs
<b>Monthly Mortgage Payment</b>	\$619.92	\$622.91	\$633.64
<b>Monthly Energy Savings</b>	-	\$(5.50)	\$3.44
<b>Public Subsidy (Downpayment + Interest)</b>	-	\$1,290	\$2,293

Source: UNDP, preliminary and simplified estimates. Interest rates, payments and energy savings refer to years 1-5 of 15 yr mortgage