

Global Housing Finance: The Potential of Covered Bonds

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EMF-ECBC Academy Training Session

“Covered Bonds: Market Trends & Legal Characteristics”

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What we will discuss

1. Birdseye view of recent global developments in housing /finance –
2. Growth opportunities for investment in residential sector in EMDE
3. Funding trends for growing mortgage sector in EMDEs
4. Challenges for development of domestic Covered Bond Framework in EMDEs

1. Birdseye view of recent global developments in housing finance – by way of background

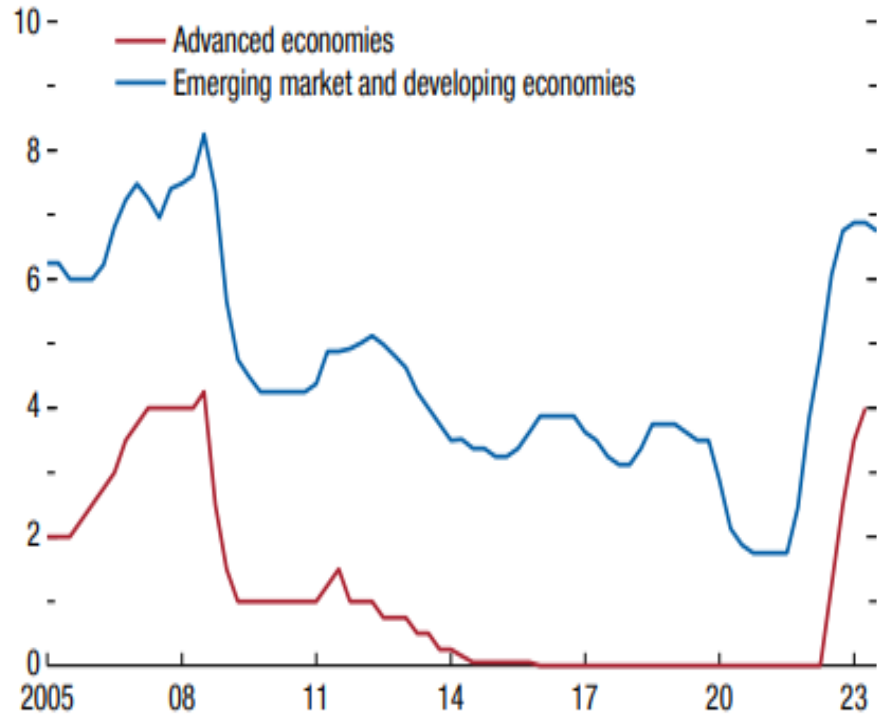
- Volatile period in mortgage market of OECD countries and EMDE alike
- Monetary tightening and its impact on house prices and affordability across markets

Global Developments In Past Decade

- **Low rates and pandemic induced supply side constraints**
 - increase in house prices globally – now stabilizing but still high in some markets
- Increase in fixed rate mortgages or part fixed globally
- Increased household debt
- **Regulatory restrictions on LTV, Dtl since GFC**
 - Impact on demand / affordability
 - Households shift to less supply-constrained market segments (rental)
- **Recent increase in policy rates and related increase in mortgage rates**
 - Reduced building activity/ supply
 - Reduced housing transactions (most severe in FRM environment), reduced effect on monetary policy transmission to curb inflation
 - Impact on house prices across countries differs according to housing market conditions – some easing in advanced markets
 - Potential wealth effect (with related effect on consumption)

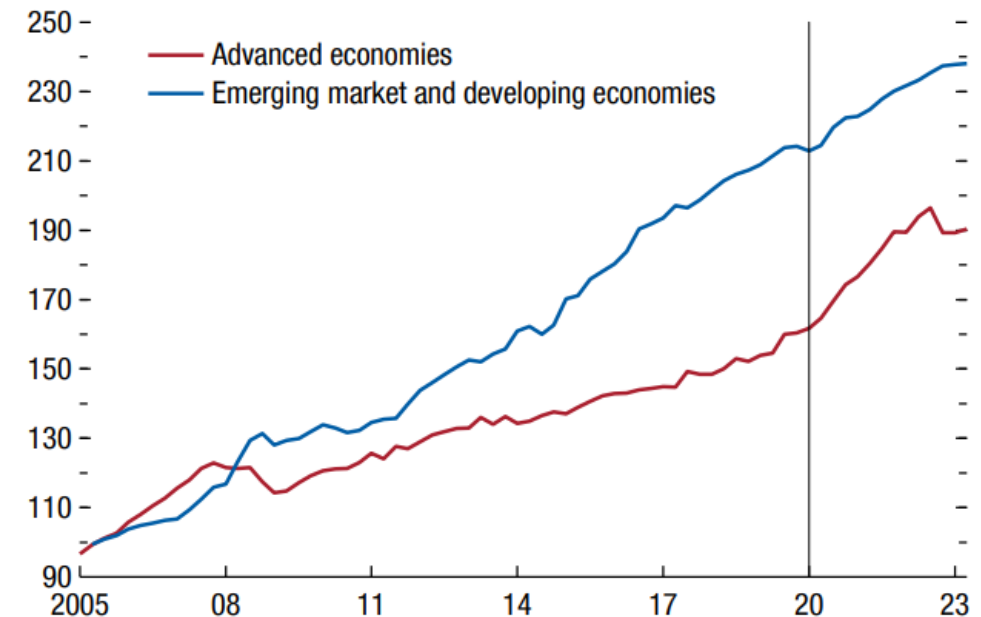
Interest Rates and House Prices (Limited data base)

Nominal Policy Rates in Advanced and Emerging Markets (*country group median, percent*)



Sources: Haver Analytics; and IMF staff calculations.

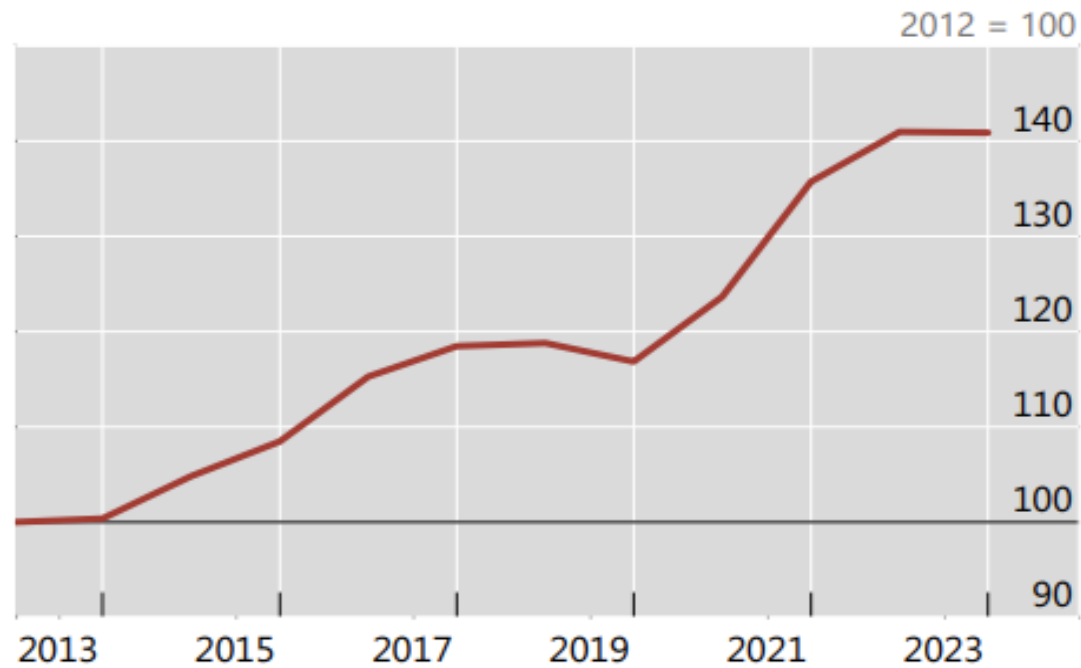
Nominal House Prices in Advanced and Emerging Economies (*country group median, index, 2005=100, percent*)



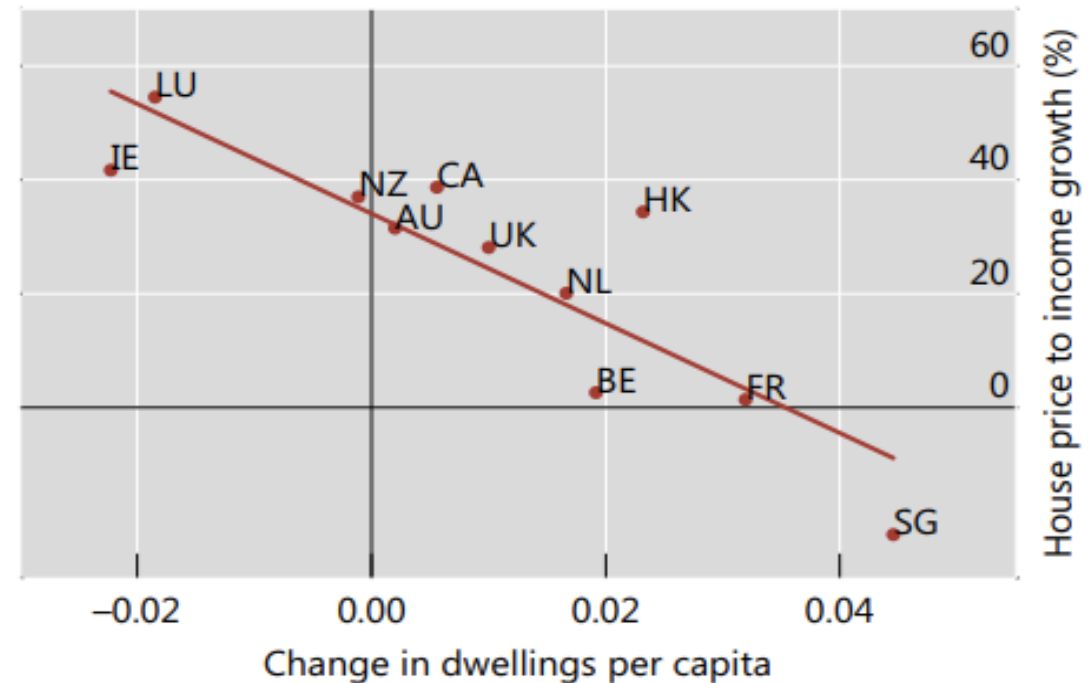
Sources: Bank for International Settlements; and IMF staff calculations.
Note: The vertical line corresponds to 2020:Q1, the start of the pandemic.

House Price to Income Ratio Increased in Last Decade- Influenced by Supply Constraints – BIS-CGFS

A. Strong rise in house prices to incomes over the past decade¹



B. House prices to incomes have risen the most where supply has increased the least²

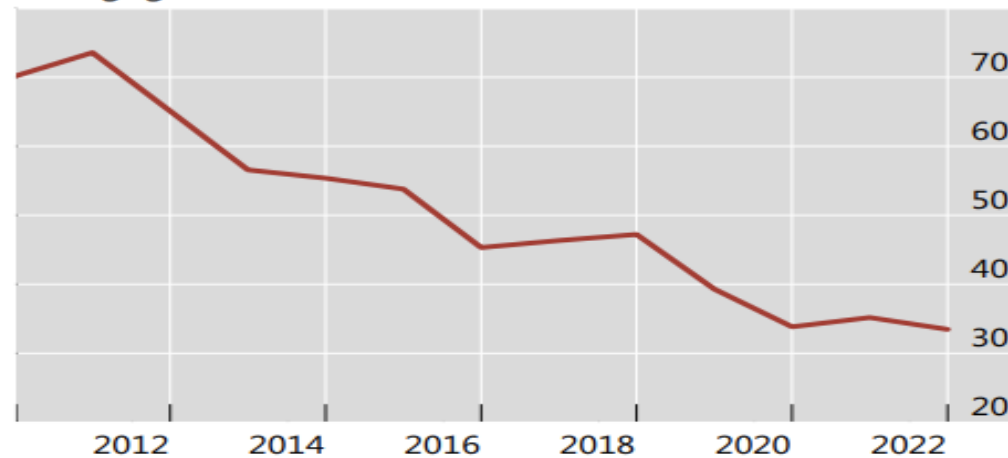


¹ Median of AU, BE, CA, FR, HK, IE, LU, NL, NZ, SG and UK. ² 2012 to latest. For SG, data refer to build-to-order public housing units in non-mature estates. SG housing market largely comprises public housing, with a significantly smaller share of private housing.

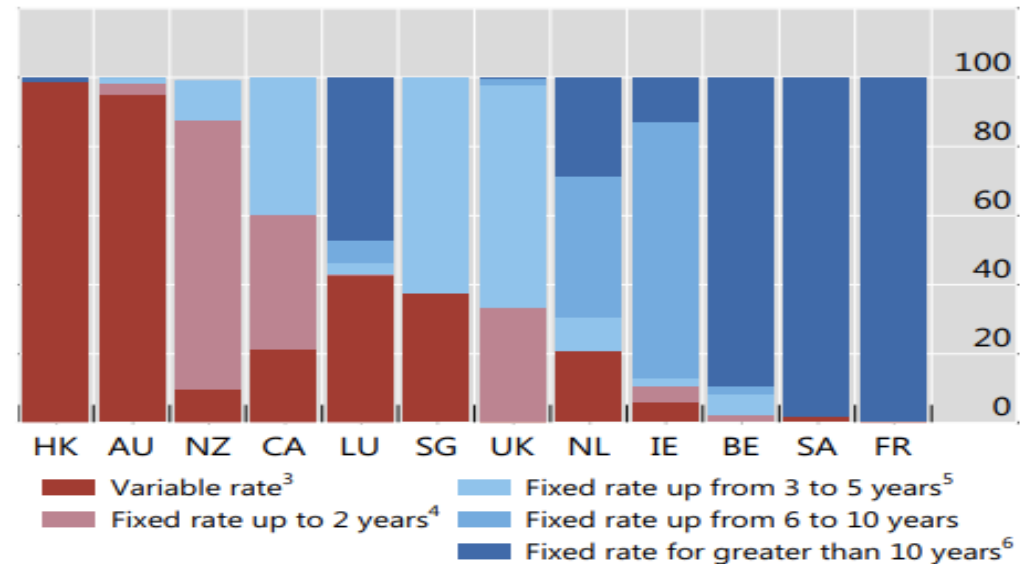
Change in % of Variable Rate Mortgages Relative to Fixed Rate – Mostly in Advanced Economies with access to medium/longer term funding

FRMs decrease interest rate risk to consumers

A. Share of variable and short-term fixed rate mortgages²



B. Large differences in borrower exposure to interest rate risk (2023 or latest available)



¹ AU, BE, CA, FR, HK, IE, LU, NL, SA and UK = new mortgages. NZ and SG = outstanding mortgages. ² Median across countries. Short-term fixed rates defined as those with fixed interest rates up to two years. ³ LU = variable rate and fixed rate mortgages up to three months. NL = variable rate and fixed rate up to one year. ⁴ LU = fixed rate from four months to two years. ⁵ NL = fixed rate from one to five years. ⁶ FR and HK = fixed rates for the duration of the loan. SG = fixed rate typically from two to five years.

Source: CGFS study group.

NB: US and Denmark where FRM dominate, are not part of this study.

Developments in Residential Real Estate Markets

Housing Markets Feel Effect of High Interest rate Environment

- Disruption of pandemic period followed by Inflation and higher interest rates
- Different impact on housing markets related to **depth of mortgage market, mortgage instruments, and supply elasticity**
- Overall effect: Higher Dtl and lower affordability (worsened by green standards), which may result in further price corrections
- Increased pressure for housing subsidies in EMDE and AE alike

Real House-Price Growth, by country or region (% yoy)

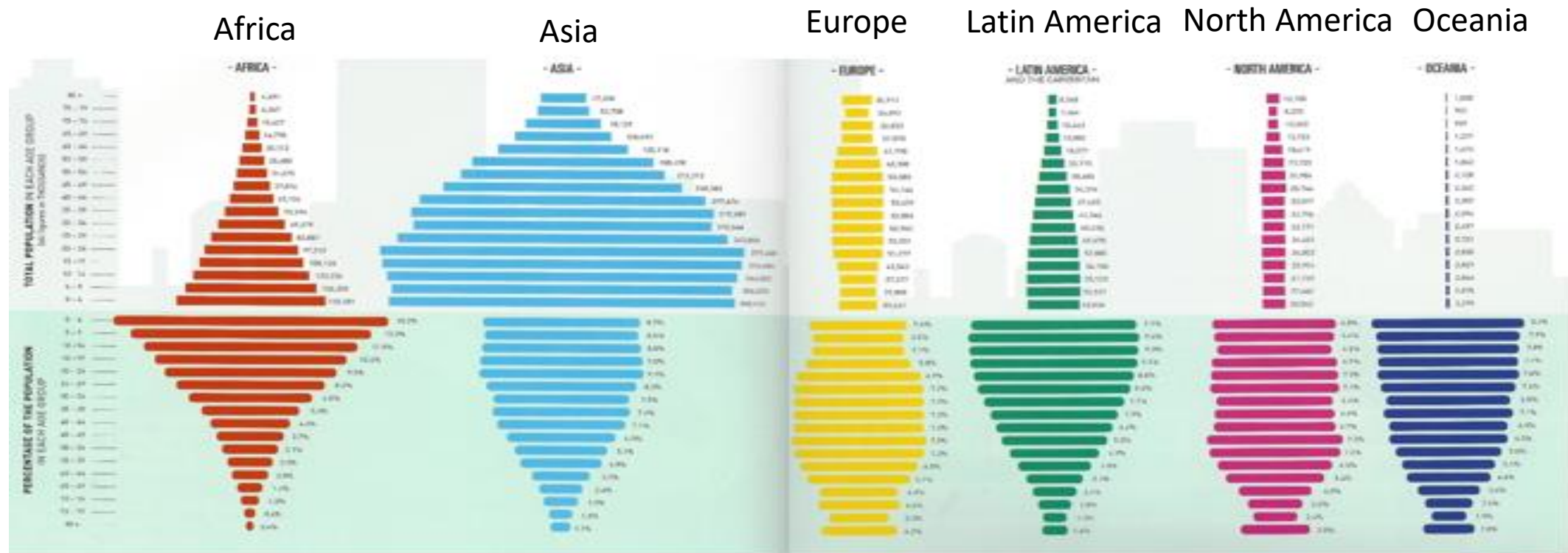


2. Investment Needs for Residential Sector in EMDE is “Infinite”

- Demographics
- Economics
- Investor opportunity / Portfolio diversification

Virtually All *Population* Growth until 2050 Will Happen in Africa and Asia

Population Pyramids by Region; total population (top)
Population Pyramids as a percentage of Region's Population (bottom)



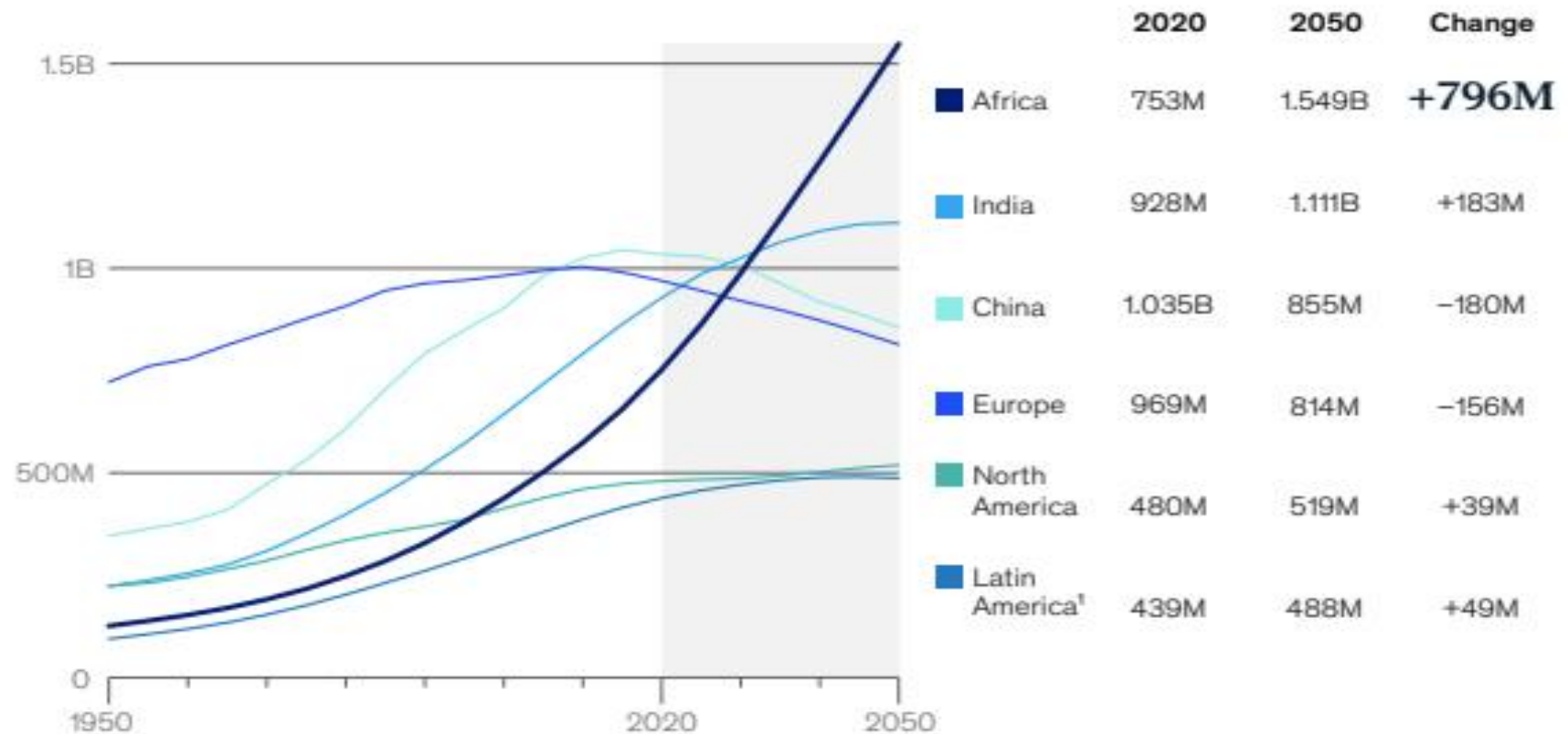
Source: D'Elfilippo and Ball

Africa and India Will Have Fastest Increase in Working Age Population; # of Households

Projection of Working Age Population by Continent 2020-2050

- **Africa** will have the largest and youngest population by 2050
- Africa will add 796 million pp to the global workforce
- **India** is distant second with 183million
- Workforce growth can be big boost to economic growth

Working-age (15–64) population



¹Includes the Caribbean.
Note: Data for 2020–50 are projected using medium variant scenario.
Sources: UN Population Prospects 2022; McKinsey Global Institute analysis

Massive Population Growth in Cities - Urbanization

2020



Urban Population

Greater than 75%

50%-75%

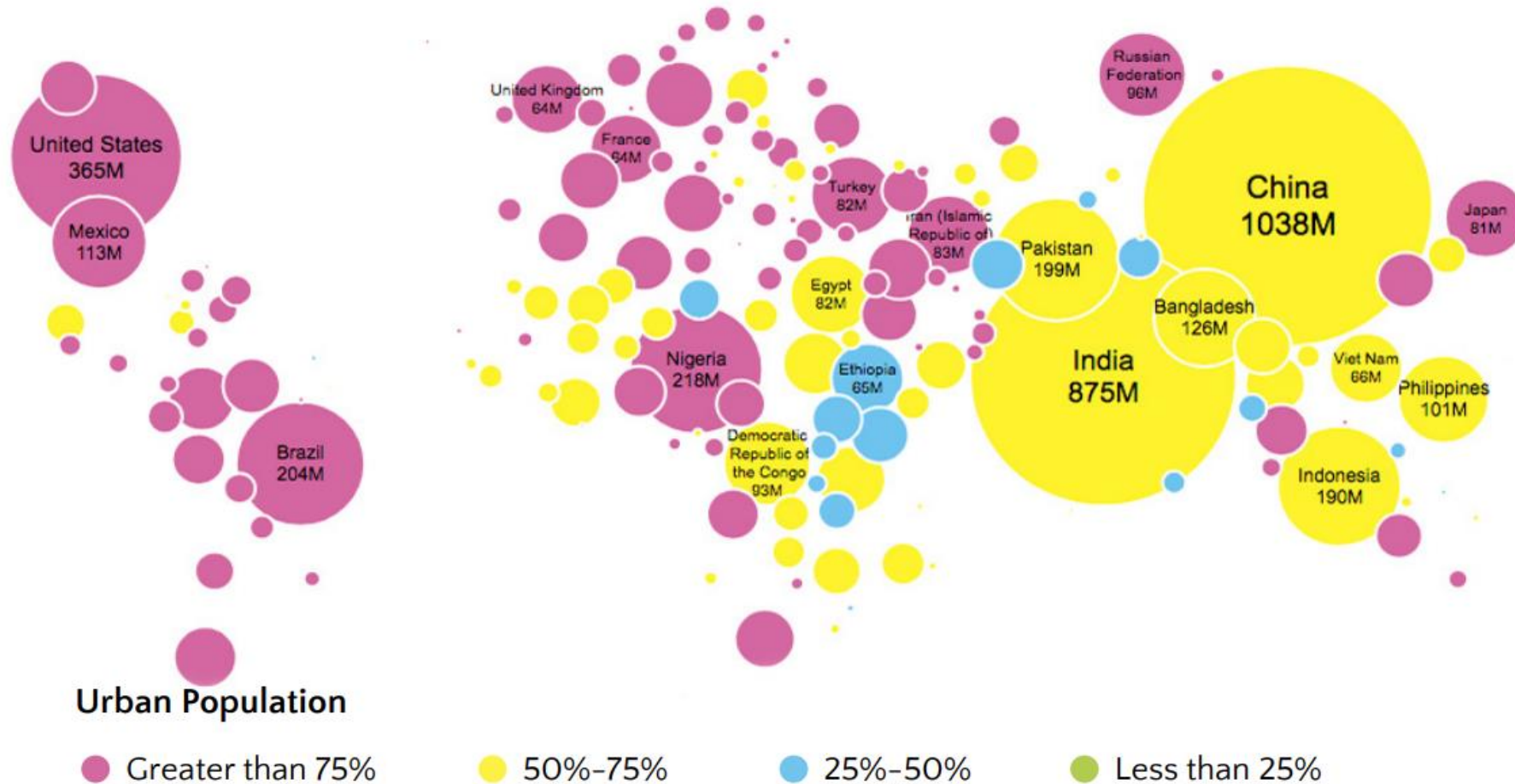
25%-50%

Less than 25%

Source: [UNICEF, An Urban World](#)

Massive Population Growth in Cities

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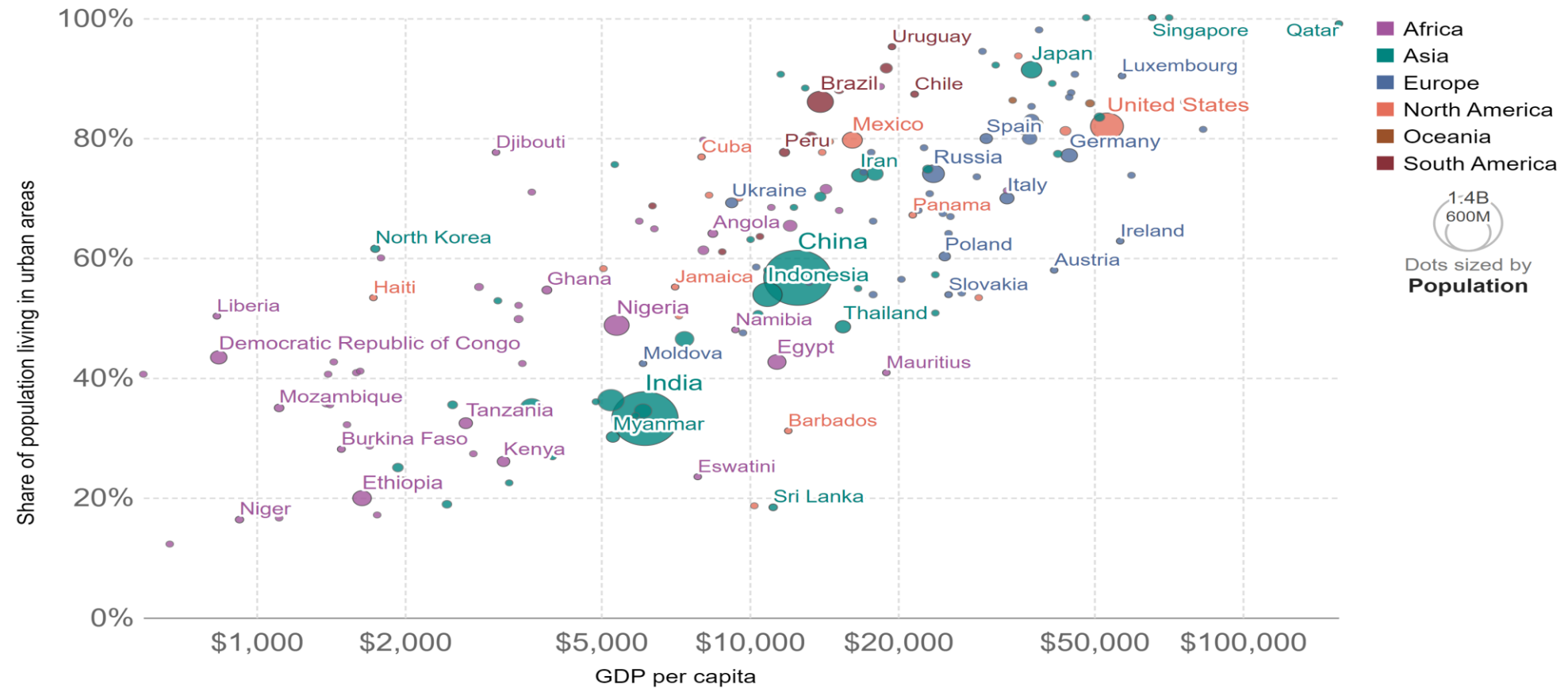
Less than 25%

Source: [UNICEF, An Urban World](#)

Urbanization and GDP are Correlated; Productivity in Urban Areas is Greater –

Urban population vs. GDP per capita, 2016

Share of the total population living in urban areas versus gross domestic product (GDP) per capita, measured in 2011 international-\$.
Our World in Data



EMDE Are Engines of Global Economic Growth

TABLE 1.1 Real GDP¹

(Percent change from previous year unless indicated otherwise)

	2021	2022	2023e	2024f	2025f
World	6.2	3.0	2.6	2.4	2.7
Advanced economies	5.5	2.5	1.5	1.2	1.6
United States	5.8	1.9	2.5	1.6	1.7
Euro area	5.9	3.4	0.4	0.7	1.6
Japan	2.6	1.0	1.8	0.9	0.8
Emerging market and developing economies	7.0	3.7	4.0	3.9	4.0
East Asia and Pacific	7.5	3.4	5.1	4.5	4.4
China	8.4	3.0	5.2	4.5	4.3
Indonesia	3.7	5.3	5.0	4.9	4.9
Thailand	1.5	2.6	2.5	3.2	3.1
Europe and Central Asia	7.1	1.2	2.7	2.4	2.7
Russian Federation	5.6	-2.1	2.6	1.3	0.9
Türkiye	11.4	5.5	4.2	3.1	3.9
Poland	6.9	5.1	0.5	2.6	3.4
Latin America and the Caribbean	7.2	3.9	2.2	2.3	2.5
Brazil	5.0	2.9	3.1	1.5	2.2
Mexico	5.8	3.9	3.6	2.6	2.1
Argentina	10.7	5.0	-2.5	2.7	3.2
Middle East and North Africa	3.8	5.8	1.9	3.5	3.5
Saudi Arabia	3.9	8.7	-0.5	4.1	4.2
Iran, Islamic Rep. ²	4.7	3.8	4.2	3.7	3.2
Egypt, Arab Rep. ²	3.3	6.6	3.8	3.5	3.9
South Asia	8.3	5.9	5.7	5.6	5.9
India ²	9.1	7.2	6.3	6.4	6.5
Bangladesh ²	6.9	7.1	6.0	5.6	5.8
Pakistan ²	5.8	6.2	-0.2	1.7	2.4
Sub-Saharan Africa	4.4	3.7	2.9	3.8	4.1
Nigeria	3.6	3.3	2.9	3.3	3.7
South Africa	4.7	1.9	0.7	1.3	1.5
Angola	1.2	3.0	0.5	2.8	3.1

WB/IMF adjusted GDP growth figures – Jan. 2024

- Global output growth is again edging down in 2024 for 3d year – est. 2.4%
- EMDE outperform advanced economies ~4%
- But major differences across different types of EMDE economies (e.g., commodity/oil producing, oil importing)

Growing Investment Potential in Emerging Markets

Performance of Emerging-Market Sovereign Bonds (MSCI EM Index 2006-2024)
 (“Proxy” for Covered Bonds?)

	Annualized Return	Annualized Volatility	Risk adj. Return	Correlation			
				MSCI EM Sovereign Bond Index	MSCI U.S. Government Bond Index	MSCI Eurozone Government Bond Index	MSCI UK Government Bond Index
MSCI EM Sovereign Bond Index (USD)	5.21%	8.38%	0.62	1	-	-	-
MSCI U.S. Government Bond Index (USD)	2.73%	4.76%	0.57	0.35	1	-	-
MSCI Eurozone Government Bond Index (EURO)	2.49%	5.01%	0.49	0.42	0.66	1	-
MSCI UK Government Bond Index (GBP)	2.82%	7.71%	0.35	0.33	0.77	0.7	1
MSCI Canada Government Bond Index (CAD)	2.80%	4.33%	0.64	0.34	0.86	0.66	0.75

Chart shows the total notional amount outstanding in USD billions of the MSCI Emerging Markets Sovereign Bond Index over the period of Jan. 1, 2006, to Jan. 2, 2024. Index weight of each country is calculated at the beginning of each year.

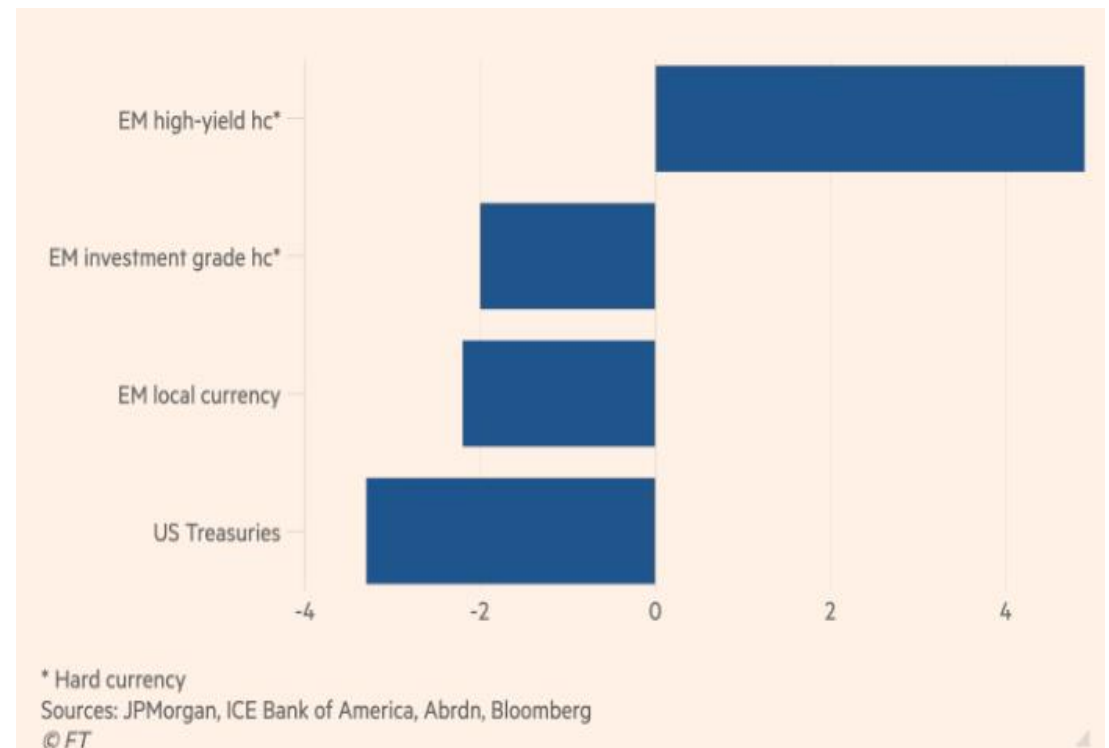
MSCI’s EM Sovereign Bond Index is linked to USD 1.1 tr. in total notional value- with potential diversification benefit; the largest sovereign issuers (except Turkey) have maintained a **sustainable level of (foreign) government debt to GDP** –

Performance of EM Sovereign Bonds 2024

EM Bonds Performance 2024

- EM sovereign debt total return of 4.9% this year
- Credit component held up
- Driven by
 - Commodity prices
 - Domestic reforms
 - Support from IMF/others to alleviate debt distress/default
- And despite higher bond yields in advanced economies resulting in outflows from EM

Gains in EM high yield government bonds in 2024



3. Current Funding Systems for Mortgage Sector in EMDEs

- Types of funding systems
- Growing demand for capital market funding in EMDEs

Types of Funding for Mortgages – Focus on EMDC

- **Loan Originator Funding Sources – Market-based**

- Deposits
- Other Corporate Liabilities
- Liquidity Facilities – increasing numbers in EMDC
- Covered Bonds
- Securitization and Secondary Mortgage Markets

There is a natural progression across these types of market-based funding sources when mortgage markets develop

- **State Funding, Provident Funds or other Special Housing Funds**

- Established during earlier high inflation periods
- Lending at subsidized, mostly fixed rates
- Some reforms to separate subsidies from finance (ex. Mexico, Korea, Columbia)

Progressive Development When Scale of Mortgage Lending Increases

- **In EMDC deposit-based funding dominates -**
 - Short-term funds at variable rate
 - ALM issues with growth of long-term mortgage debt (>20%)
 - Limits lending at fixed or partially fixed rate, preferred by consumers
- **Pressure to access longer term funds - at affordable rates - when scale of mortgage lending increases –**
 - Corporate liabilities if high rated institution
 - Liquidity facilities to access capital markets and on-lend to mortgage lenders –
 - Frequent catalyst for establishment of **covered bond framework – gold standard** – double recourse, credit risk remains with issuer, countercyclical...
 - Or sell mortgage assets – MBS
- **Which mix is chosen depends on market needs, types of risks to be addressed, regulatory costs**

EXAMPLE: Latin American Region-

“Other” are various subsidized funds

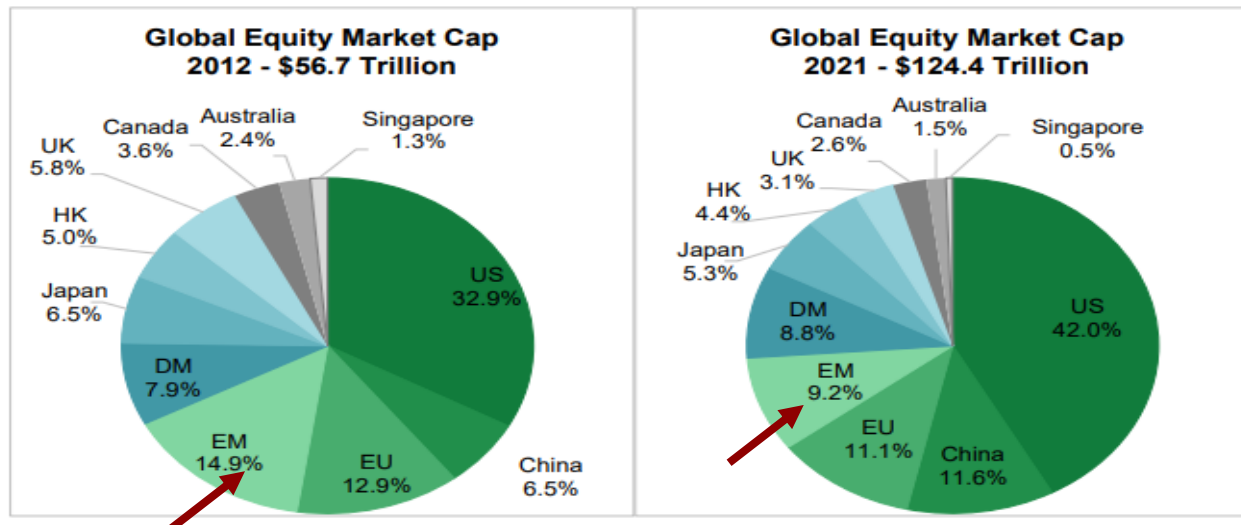
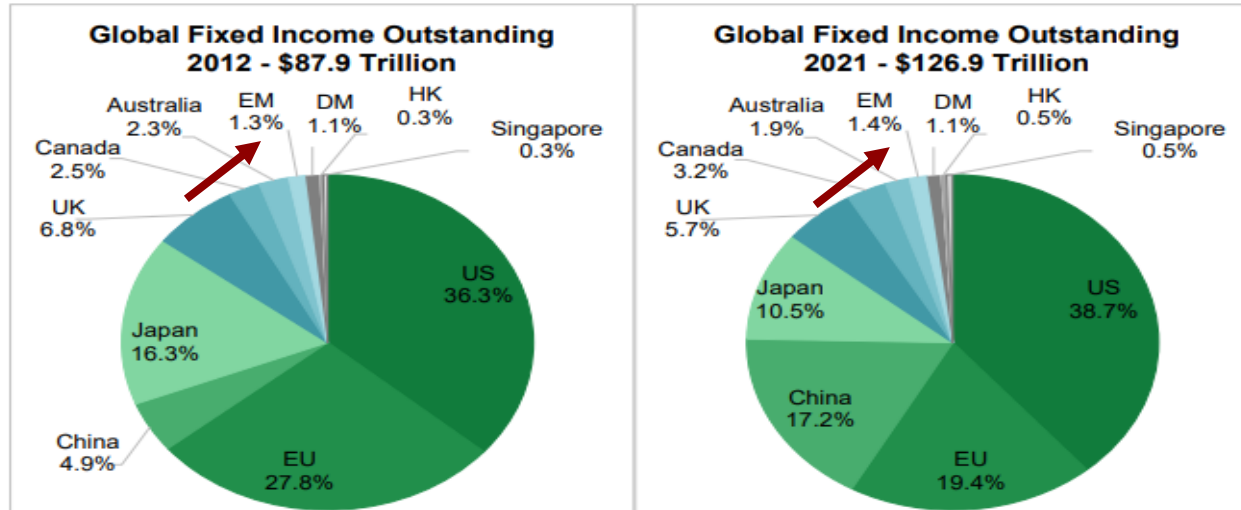
HOFINET | Housing Finance Information Network

LATIN AMERICA

Country	Retail	Loans from other banks or corporations	Mortgage Bonds	Securitization of Mortgages	Provident Funds	Other	Amt. of Mortgage Loans Outstanding / GDP (%)
<u>Antigua and Barbuda</u>	primary	secondary				secondary	21.91
<u>Argentina</u>	primary						0.33
<u>Bahamas, The</u>	primary	secondary				tertiary	34.93
<u>Barbados</u>	primary	secondary				tertiary	38.51
<u>Bolivia</u>	primary						11.13
<u>Brazil</u>	primary				secondary		9.14
<u>Chile</u>	primary		tertiary			secondary	21.39
<u>Colombia</u>	primary			secondary	tertiary		5.5
<u>Costa Rica</u>	primary	secondary		quaternary			15.93
<u>Dominica</u>	primary	secondary					20.22
<u>Dominican Republic</u>	primary						4.36
<u>Ecuador</u>	primary					secondary	2.11
<u>El Salvador</u>	primary			tertiary		secondary	12.84
<u>Grenada</u>	primary	secondary					22.48
<u>Guatemala</u>	primary		secondary	tertiary			1.75
<u>Guyana</u>							15.45
<u>Haiti</u>	primary					secondary	0.9
<u>Honduras</u>	primary					secondary	8.67
<u>Jamaica</u>	secondary				primary		2.08
<u>Mexico</u>	secondary	quaternary		tertiary	primary		9.92
<u>Nicaragua</u>	primary						4.74
<u>Panama</u>	primary			secondary			21.87

But Domestic Capital Markets Are Small in Emerging Economies

Global Fixed Income Mkts Outstanding, and Equity Mkts Capitalization 2012-21



- Cap markets in EM are small, both fixed-income and equity markets
- Domestic cap markets in EMDE did not increase as proportion of global cap markets during last decade
- Domestic Pension funds, insurance companies often reluctant to invest in housing finance debt

Source: Bank of International Settlements (BIS), World Federation of Exchanges

Note: Market capitalization of listed domestic companies. DM = developed markets, EM = emerging markets, HK = Hong Kong. DM/EM exclude countries listed in the chart

4. Developing Domestic Covered Bond Frameworks* in EMDEs

- Guidelines for establishing CB Framework
- Challenges:
 - Product quality/customer characteristics
 - Type of lenders, issuers
 - Subsidy systems
 - Regulatory and supervisory environment
- Focus on domestic investor market for CB

*Harmonization with the Covered Bond Directive or ECBC “Harmonized Transparency Template (HTT)” of the covered bond label still irrelevant for most EMCE

Guidelines for Establishing a Covered Bond Framework in EMs

- **ECBC's Global Issues Working group**
 - Fundamental principles of covered bonds on a global scale
 - Guideline for countries that consider introducing CB framework
- **Core principles that are mostly agreed across countries and “relatively” easy to codify**
 - Dual recourse
 - Overcollateralization
 - Bankruptcy remoteness
 - Asset segregation
- **Some guidelines need flexible application to suit EM realities**
 - Eligibility of cover assets
 - Quality and supervision of the issuing financial institution
 - Dealing with predominance of subsidized mortgages
 - General legal financial governance and green performance regime (not in this talk)

Challenges for Countries with Less Developed Mortgage Markets: Potential Issues (1)

- **Asset eligibility criteria – quality of the assets/risk-levels of the pool**
 - Strength of property registration system and recovery process after default
 - Strength of customer underwriting, including informally employed
 - Dtl criteria – housing expenditure as % of income increases with country's income level
- **Type of asset – Can home equity loans with first or second liens be eligible for CB pool?**
 - Loans to retrofit homes (e.g. for climate change)
 - CB could make this market more attractive to lenders and borrowers
 - Some special provisions may apply (e.g., max LTV for combined loans)

Challenges for Countries with Less Developed Mortgage Markets: Potential Issues (2)

- **Quality and supervision of the issuing financial institution**
 - Non-banks are major mortgage issuers of high-quality mortgages in some EMDEs
 - Provident funds
 - Mortgage companies
 - Cooperatives or other mutuals
 - Microfinance institutions - NGOs
 - What is the quality of supervisory public entity for each category of lender?
 - What is corporate rating?
 - Can the issuer maintain sufficient assets in the cover pool/on balance sheet?
 - Does issuer have the data systems for investors to analyze the assets?

Challenges for Countries with Less Developed Mortgage Markets: Potential Issues (3)

- **Challenge of predominance of subsidized mortgages**
 - **Examples:** Provident or Workers Funds in Latin America, Nigeria, Indonesia; Government or Central Bank funding in Indonesia, Egypt
 - Interest rate subsidies often too deep to solve with overcollateralization
 - Subsidized mortgages may have higher credit risk
 - Subsidized market keeps commercial mortgage market small
- Yet, subsidies are often required
- **Adjustments in mortgage subsidy regimes; allow cap market access**
 - **INFONAVIT, Mexico** changed from subsidized interest rates to charging close to market rates and internally cross-subsidizing workers of lower-income groups
 - **Egypt** made it mandatory that interest rate subsidies are in the form of on-budget interest rate Buy-downs
 - **India's** mortgage subsidy program is based on a buy-down from market rates
 - **Korea** established separate housing fund for targeted subsidies while keeping commercial mortgage market free from subsidies

Concluding

- Volatile macro-economic period + decrease in housing supply caused **increase in house-prices relative to incomes** globally
- Worst effects in **EMDE's housing markets** which experience exponential urban population growth – **but offer promising growth opportunities**
- EMDE's mortgage mkts require **urgent access to capital market funds** at affordable rates to built housing at scale
- **Covered bonds may offer effective option** -
- But CB guidelines need **flexible application** to deal with:
 - Varied quality and type of cover asset
 - Unconventional types of mortgage issuers
 - Subsidized mortgage environments
 - General legal and green performance regulations
- Focus CB regime in EM on **domestic investors** (+IFIs) who know the local market, but may need some convincing

THANK YOU

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