PENSIONS AND LONG-TERM FINANCE

WORLD BANK GROUP

Fiona Stewart

Pension Core Course 2018

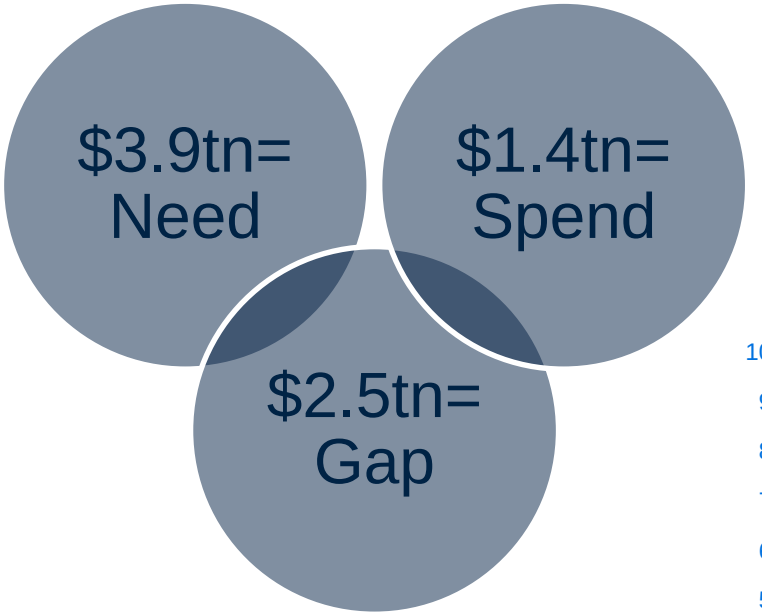
Here's the theory…long term investors = long term investments

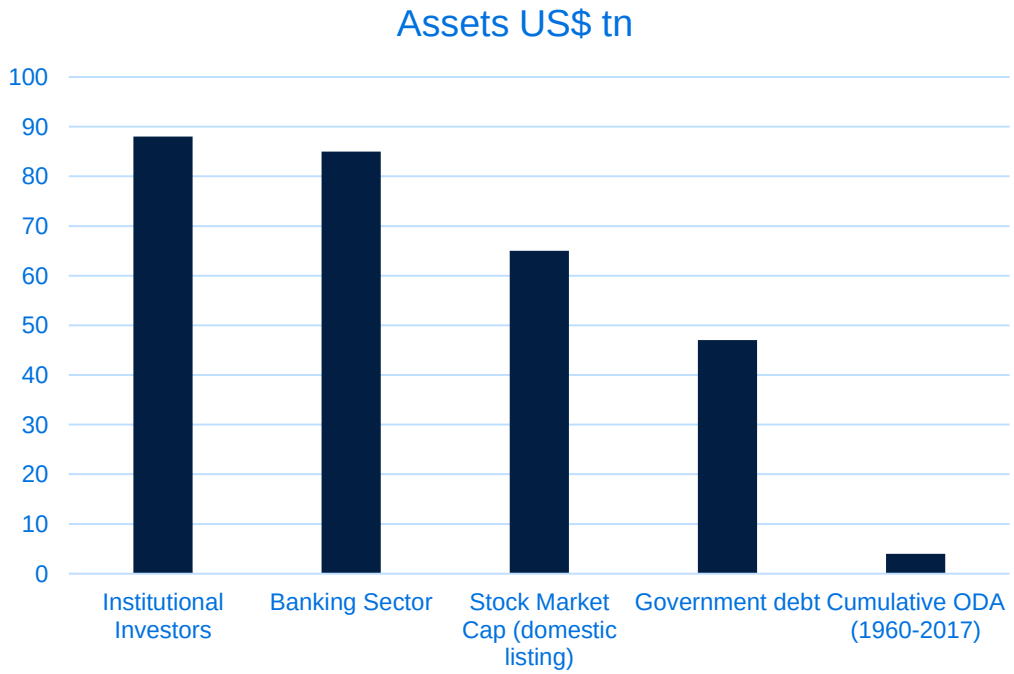
INSTITUTIONAL INVESTORS OWN
$100 TRILLION ASSETS

INFRASTRUCTURE FINANCING GAP
$1 TRILLION ANNUALLY

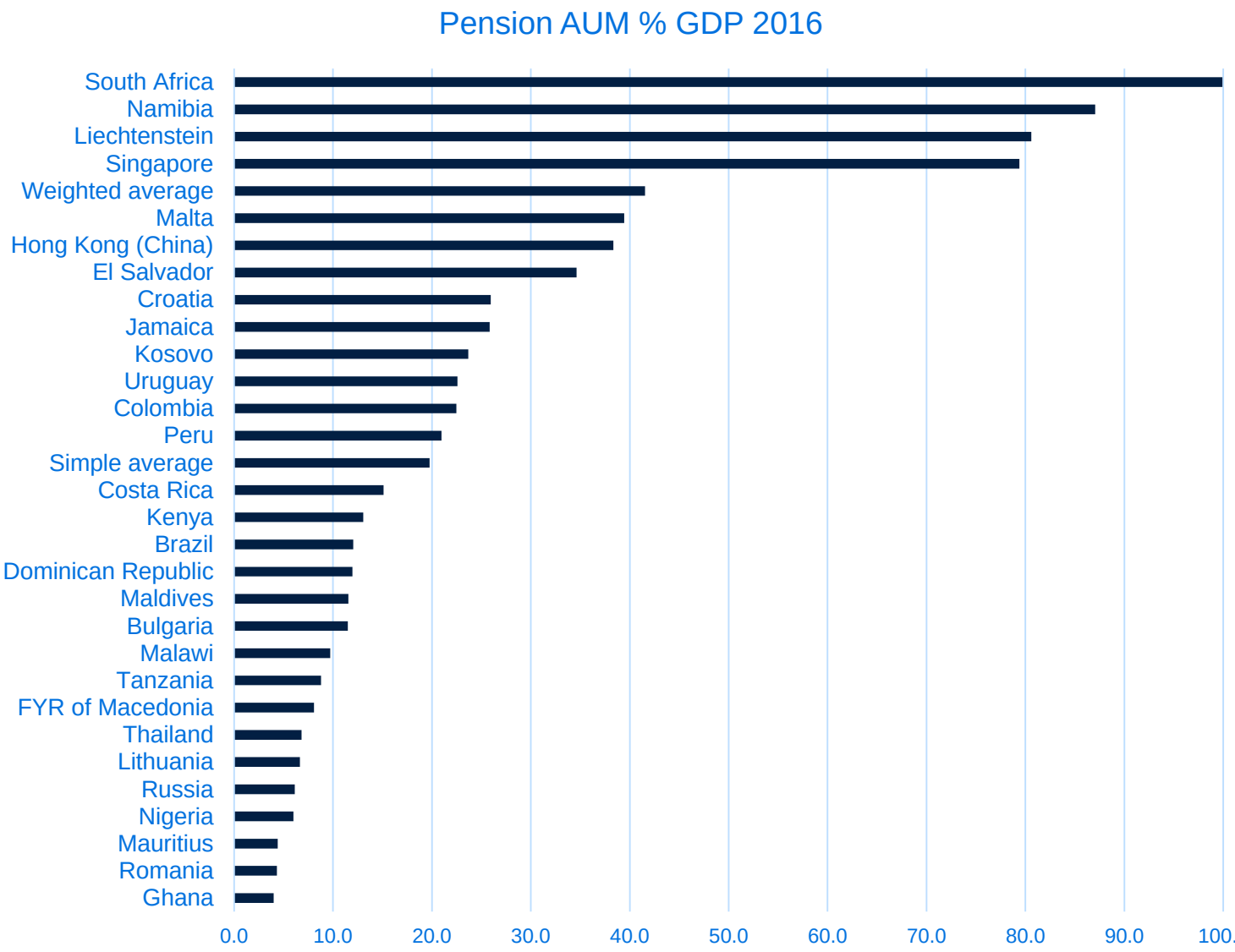
SIZE OF DEVELOPMENT SPENDINGS NEEDS VS. INSTITUTIONAL INVESTOR ASSETS

Annual Investment Needs Developing Countries Meet 2030 SDG





PENSION FUNDS MAJOR SOURCE OF LOCAL CAPITAL



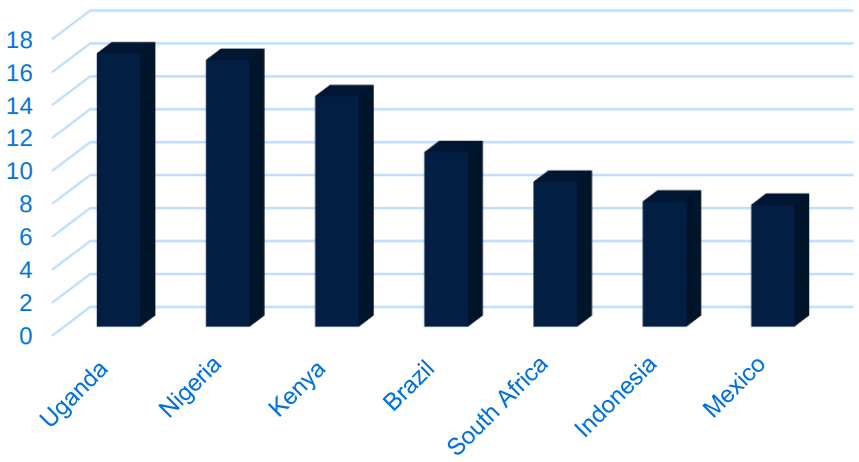
OECD Global Pension Statistics

PENSION FUND INVESTMENT IN DEVELOPING MARKETS

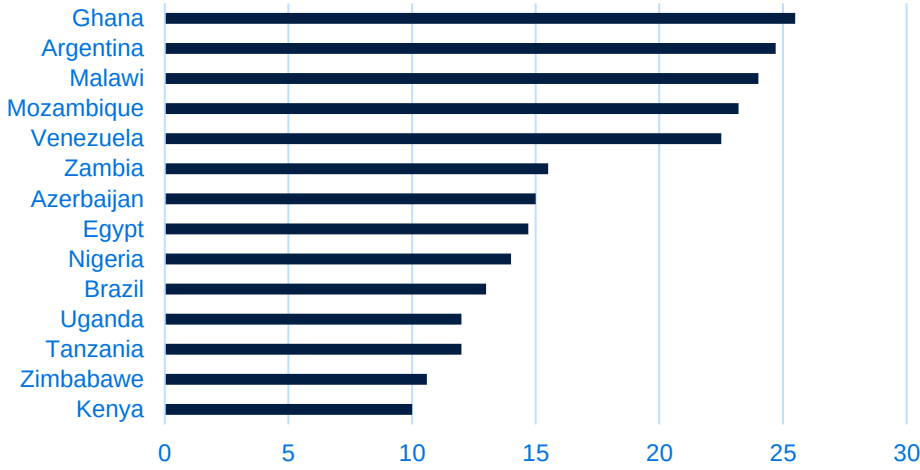
- In many developing markets, challenge is ***high*** rather than low interest rates….
- …which leads to pension/ social security fund (largest pools of domestic capital) concentrating investments in government bonds/ bank deposits...
- ….which leads to poor returns (diversification and returns are correlated)…
- …and domestic assets not being used for ‘productive’ investment in economic development
- Regulation can hinder rather than help
- Solutions?
  - *Get regulatory incentives right*
  - *Structure vehicles to access domestic investment opportunities*
  - *Allow some international diversification*

HIGH INTEREST RATE CHALLENGE

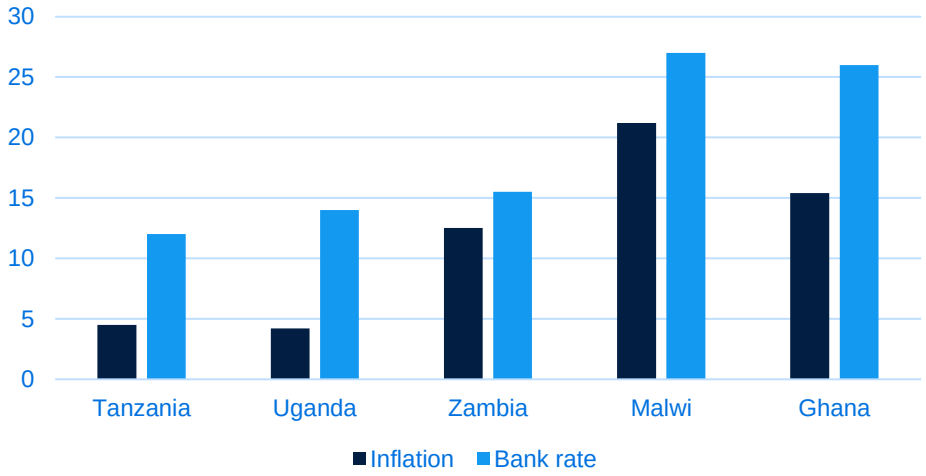
10 year Government Bond Yield



Benchmark Interest Rates

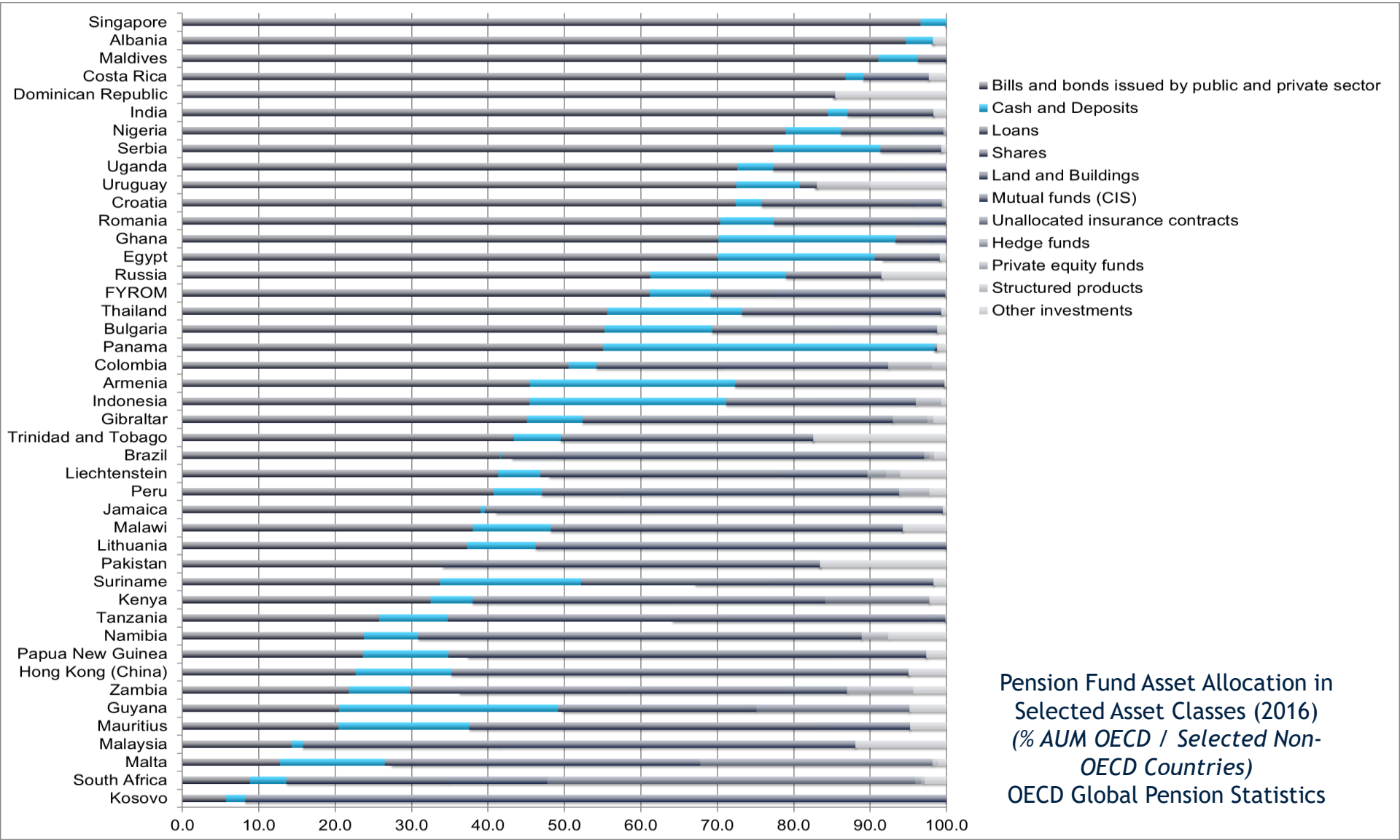


Inflation Rate vs. Bank Rate



2016 Macro Statistics

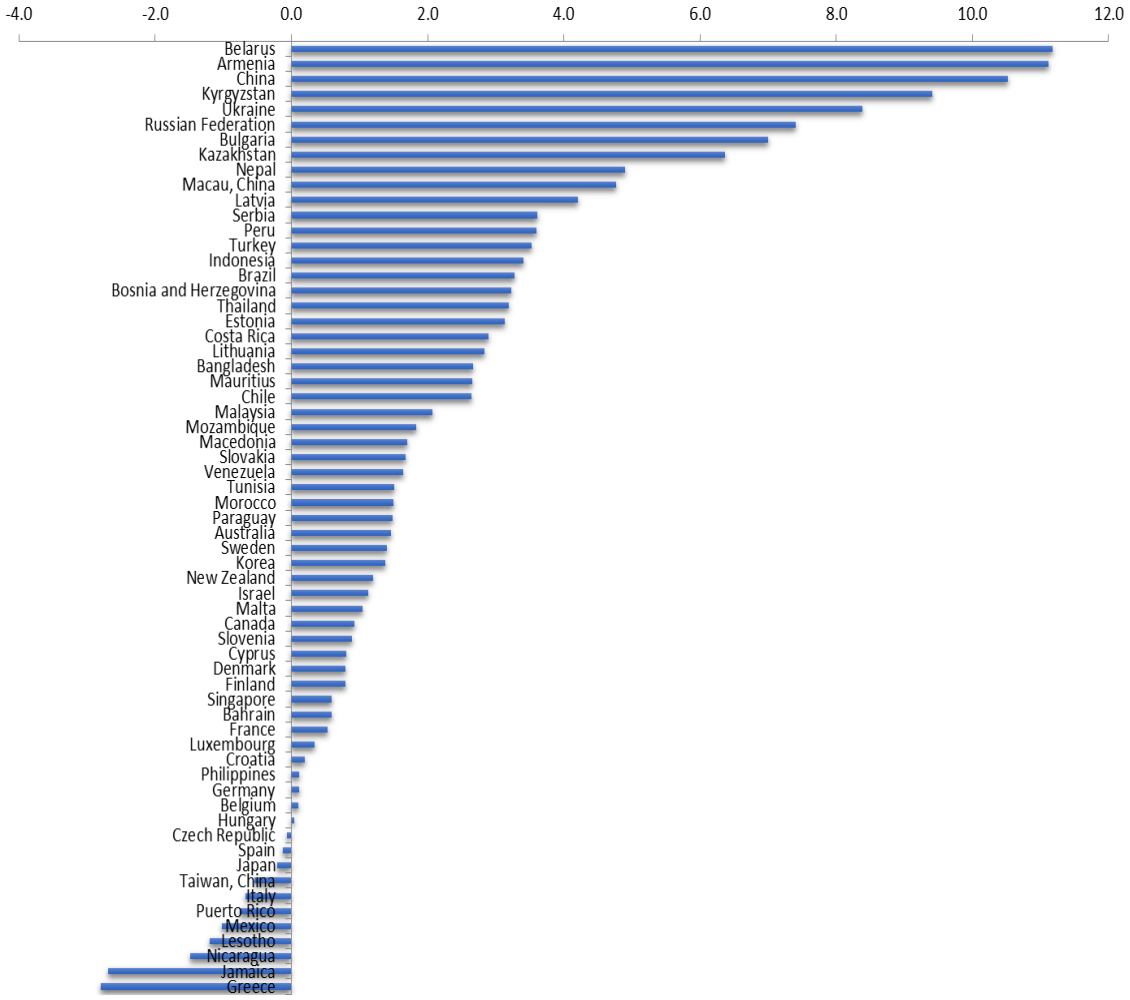
PENSION FUND ASSET ALLOCATION



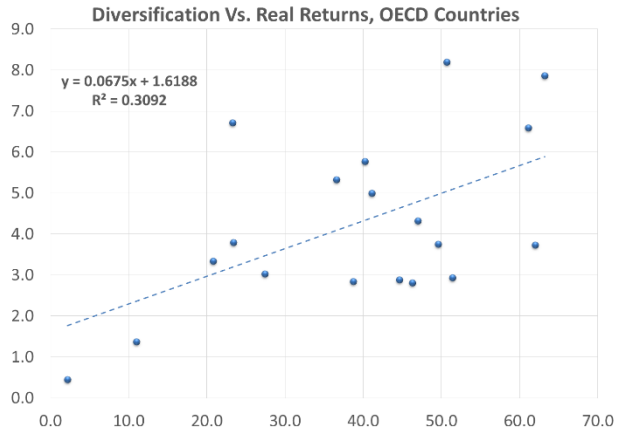
Pension Fund Asset Allocation in Selected Asset Classes (2016)
(% AUM OECD / Selected Non-OECD Countries)
OECD Global Pension Statistics

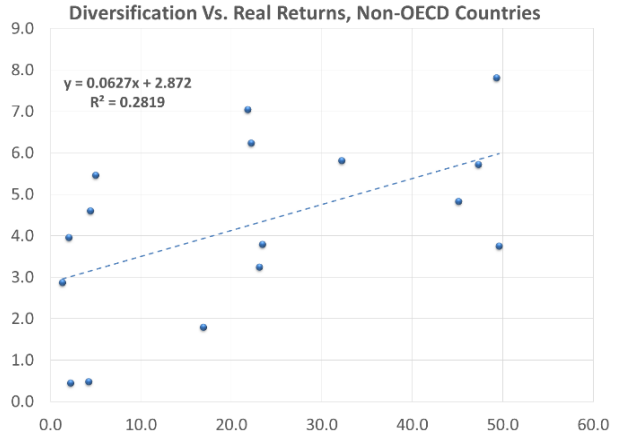
INVESTMENT RETURN CHALLENGE

Nominal Investment Returns - Wage Real Growth, 2006-2013



Portfolio Diversification vs. REAL Investment Returns, 2009-2015





Despalains, Remizova & Stewart (2017)

REGULATION CHALLENGES

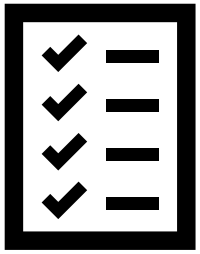
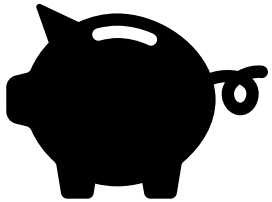
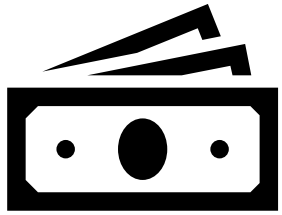
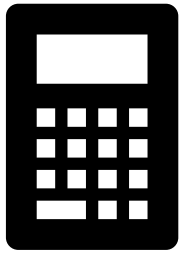
- Overly restrictive asset class limits
- Relative return guarantees
- Focus on short-term returns / volatility
- Short-term performance measurement
- Switching

SOLUTIONS?

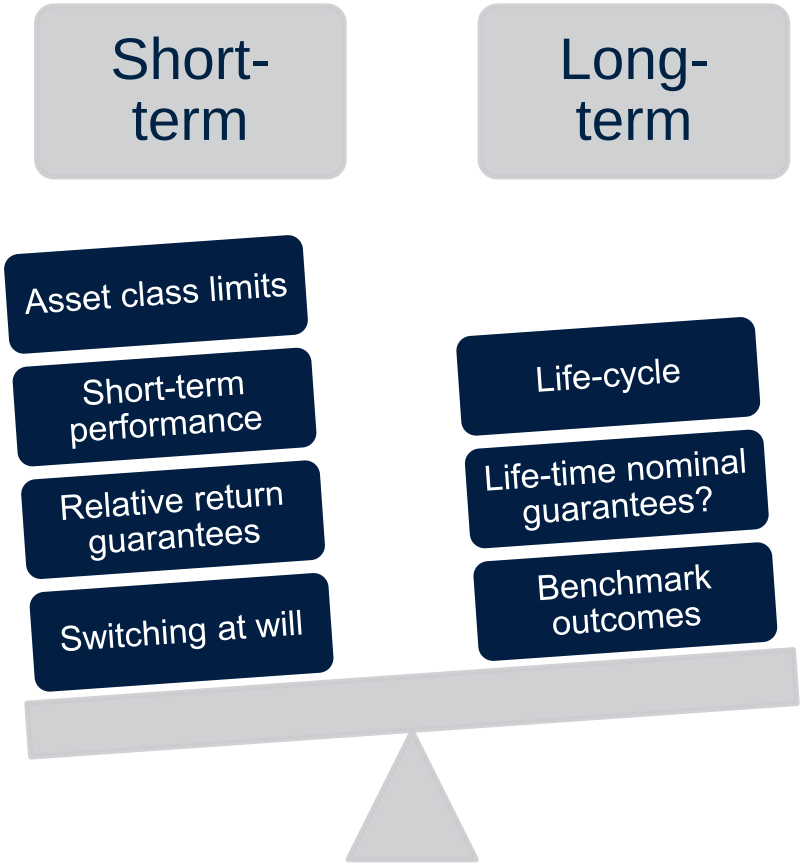
MACRO STABILITY

Government bond market reforms

- Budget planning / issuance calendar
- Maturity / benchmark creation
- Primary market infrastructure
- Secondary market infrastructure

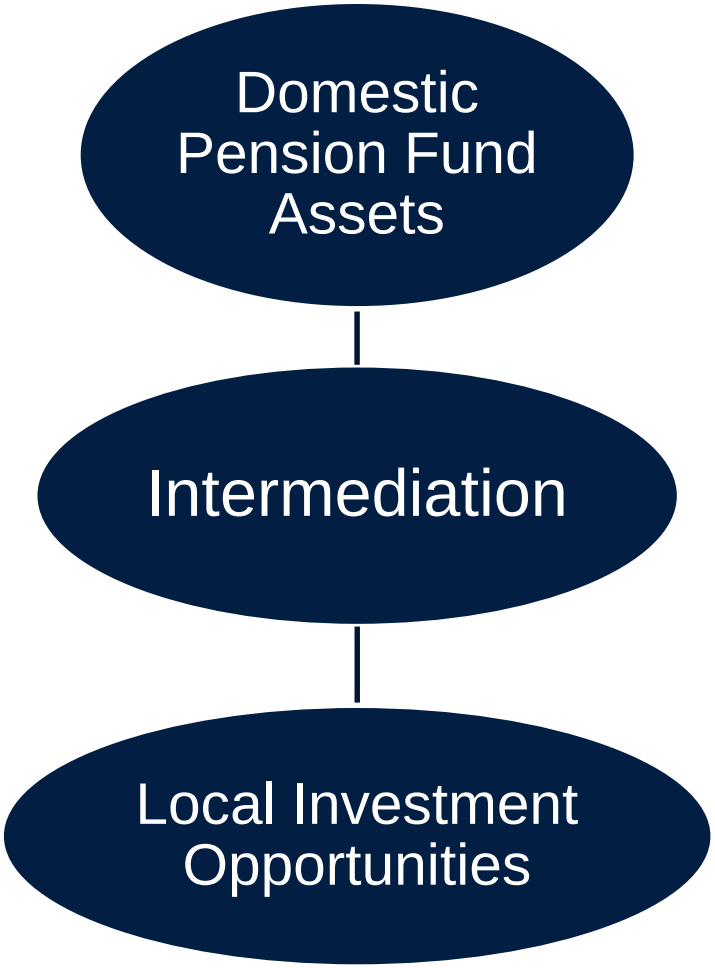





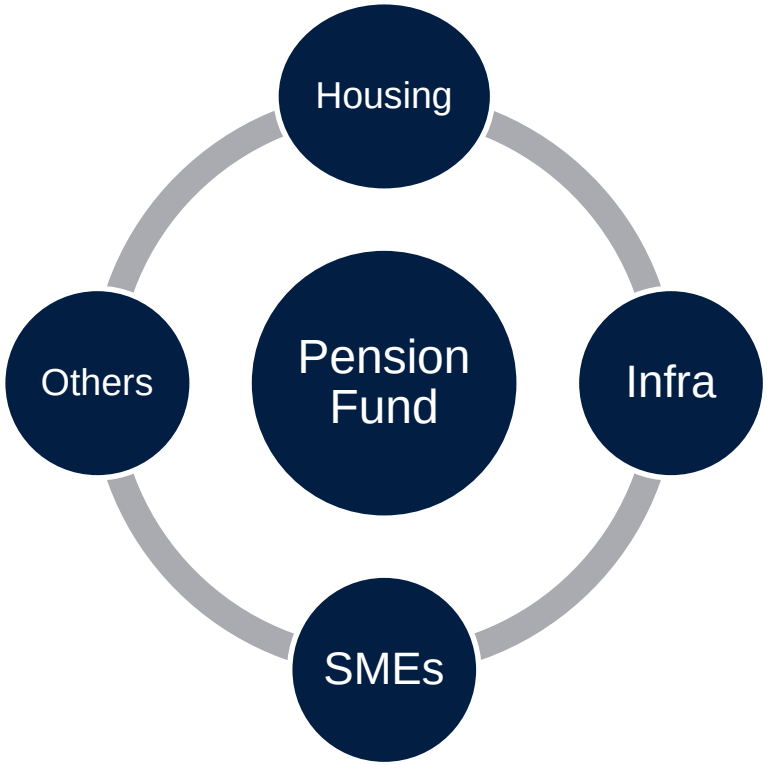
REGULATORY INCENTIVES



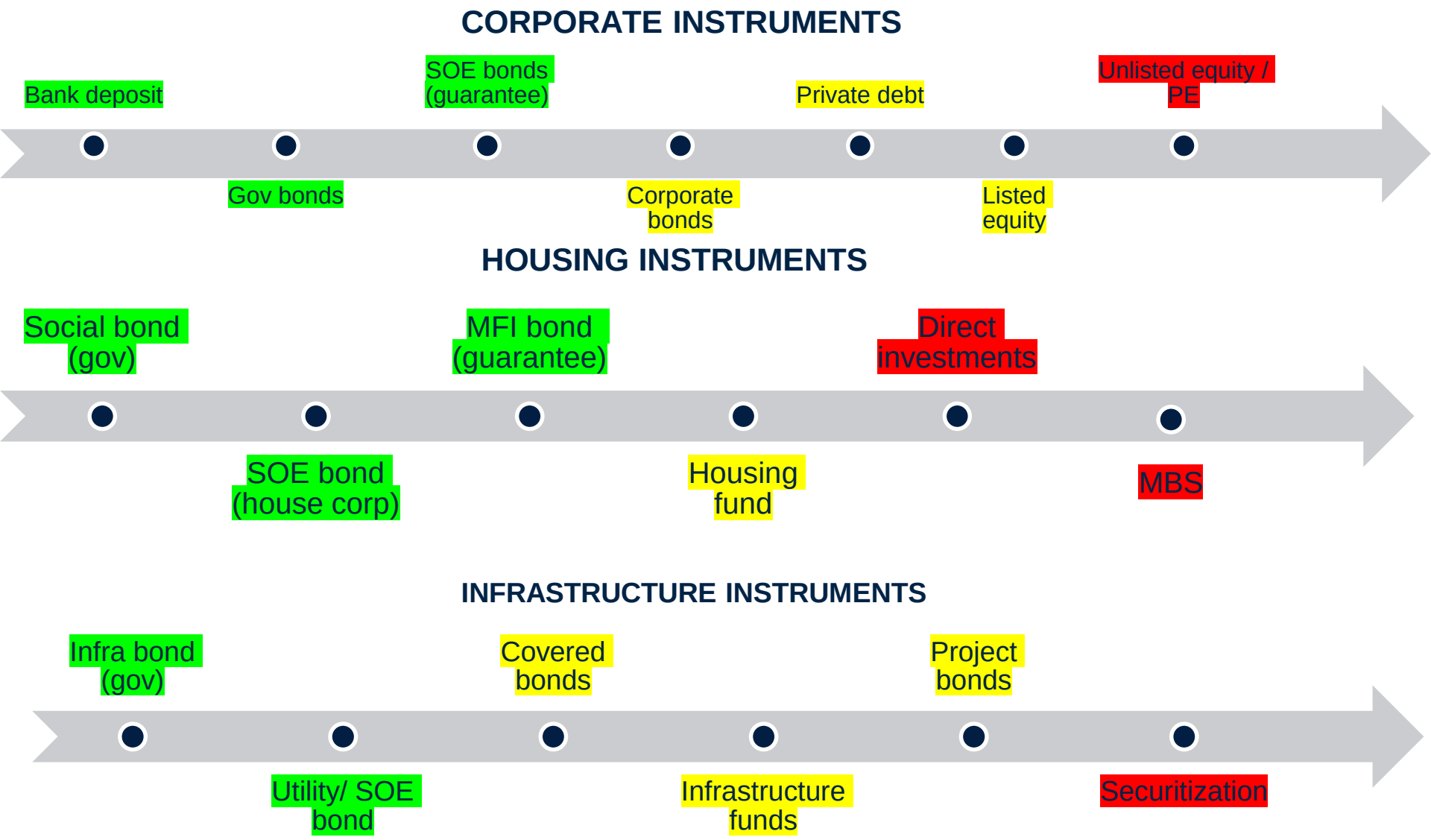
CREATING INVESTMENT OPPORTUNITITES

INTERMEDIATION KEY





CAPITAL MARKET INSTRUMENT VS. RISK PROFILE



MEXICO – CREATION OF INVESTMENT INSTRUMENTS

CURRENT INVESTMENT OPPORTUNITIES COMPRISE THE MAJORITY OF ASSET CLASSES USED BY INTERNATIONAL PENSION FUNDS

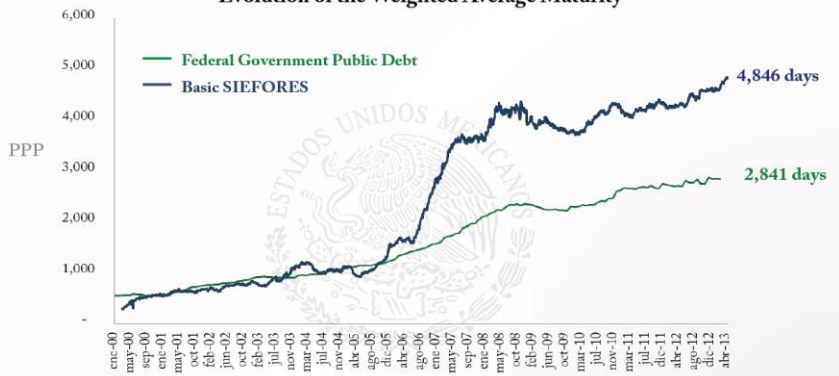
Currently there are six asset classes:

Asset classes allowed within the Investment Regime of Pension Funds

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Debt	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Currencies	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Equity	x	x	x	x	x	x	x	x	✓	✓	✓	✓	✓	✓	✓	✓
Structured Securities: CKDs (Mexican Private Equity) y FIBRAS (Mexican REITs)	x	x	x	x	x	x	x	x	x	x	✓	✓	✓	✓	✓	✓
Securitizations	x	x	x	x	x	x	x	x	x	x	✓	✓	✓	✓	✓	✓
Commodities	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	✓

PENSIONS FUNDS ARE INCREASING THEIR PORTFOLIO DURATION CONSISTENT WITH THEIR LONG TERM OBJECTIVE

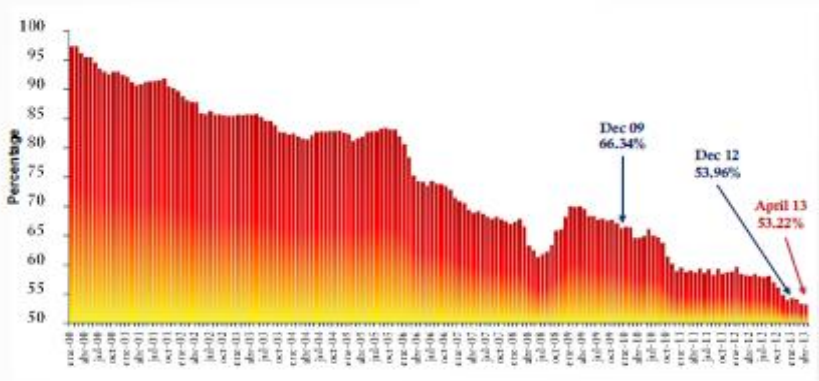
Evolution of the Weighted Average Maturity



Figures at the end of April 2013. Information of the Federal Government Public Debt by the Central Bank last published date (February 2013).
Source: CONSAR Financial Vice-Presidency

THIS BROADER SET OF INVESTMENT OPPORTUNITIES HAS TRANSLATED INTO A LOWER CONCENTRATION IN SECURITIES ISSUED BY MEXICO'S FEDERAL GOVERNMENT

Participation in Government Securities in the Pension Funds portfolios



Figures in millions of pesos at the end of April 2013
Source: CONSAR Financial Vice-presidency

NAMIBIA –CREATION OF SPVS

Regulation 28 of Pension Fund Act requires pension funds and insurance companies to invest between 1.75% and 3.5% in locally unlisted investments

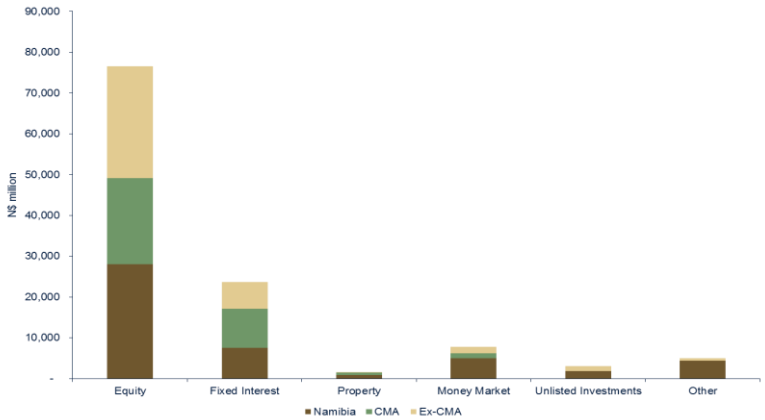
Regulation 29 Creates Special Purpose Vehicles which allow them to comply

These must have an independent Board or Trustees with fiduciary duty

Appoint fund managers specially licensed to manage unlisted investments

Can invest in debt or equity according to the SPV own objectives – most so far have been in real estate and SME debt

Charges 2-3% AUM – high PE style costs but small overall % of portfolio



NamPro Fund
The Namibia Procurement Fund

INFRASTRUCTURE

CAPITAL MARKET SOLUTIONS

Changing Trends in Financing Infrastructure through Capital Markets

- Government/bank lending as a source of LT- financing is diminishing due to the financial crisis and new prudential regulations
- Sufficient capital: institutional investors in OECD countries (USD80 trillion) and Emerging Market Economies (EME) (USD 5.3 trillion) in AUM and USD 10 trillion if Sovereign Wealth Funds are included.
- Collaboration between Governments, development banks and multilaterals have and increasing role in "crowding in" private sector investments, in particular engaging long-term Institutional investors.
- DFI's are recognizing the need to move away from traditional direct lending.

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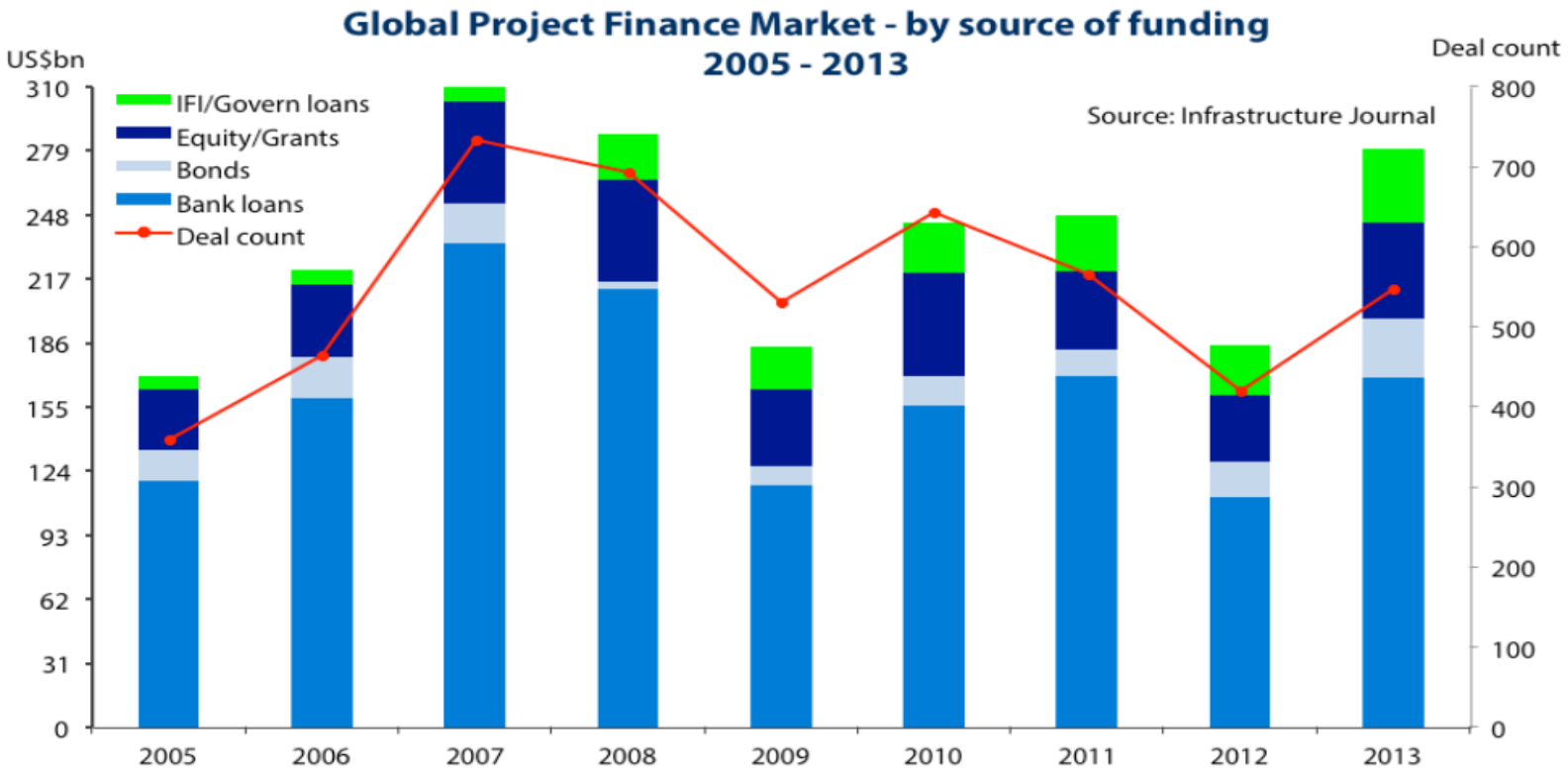
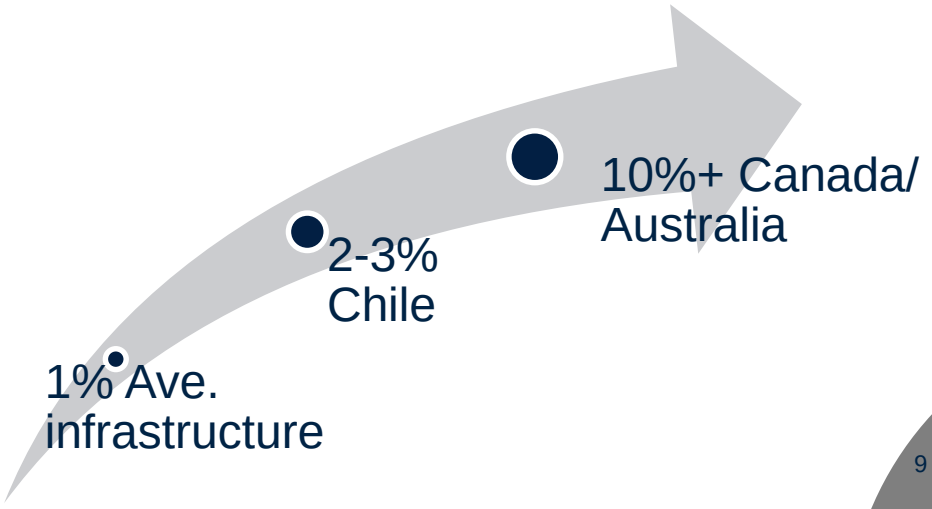
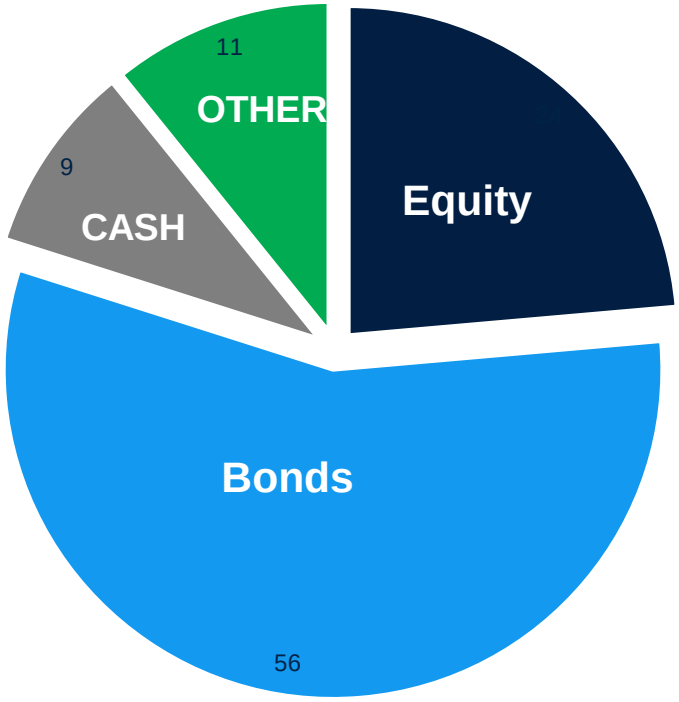
PRIMARY FINANCING SOURCES

Bank lending main source of financing progressively complemented by bonds



PRACTICE – LITTLE LONG-TERM INSTITUTIONAL INVESTORS ASSETS ARE IN INFRASTRUCTURE

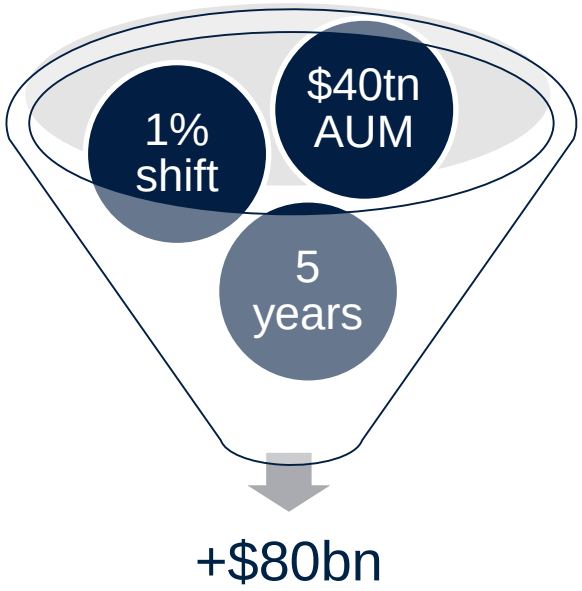




GLOBAL PENSION FUNDS ASSET ALLOCATION: Source OECD

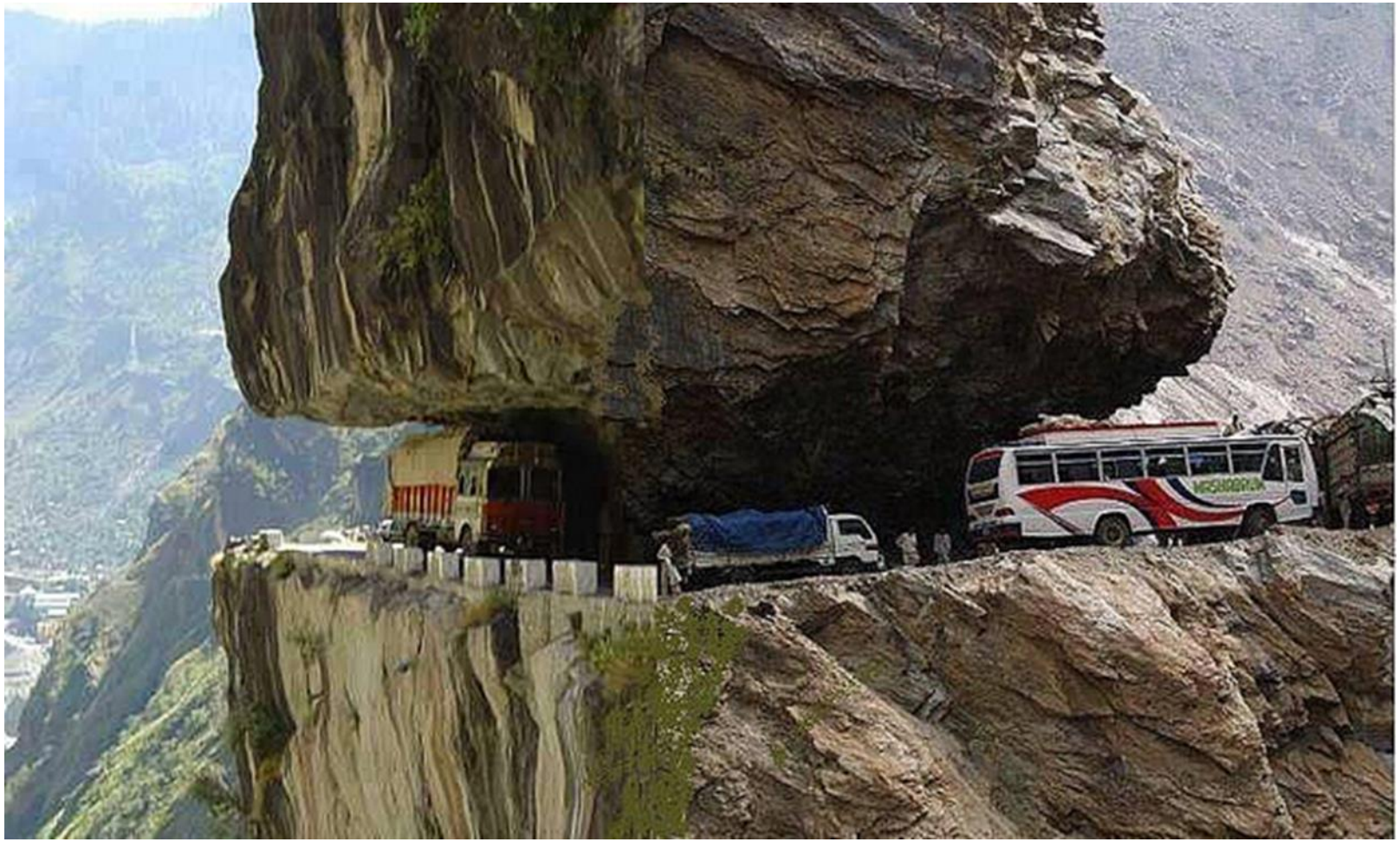
PENSION FUNDS CAN BE *PART* OF THE SOLUTION

INCREASE AVE. allocation 1-2% OVER 5 YEARS



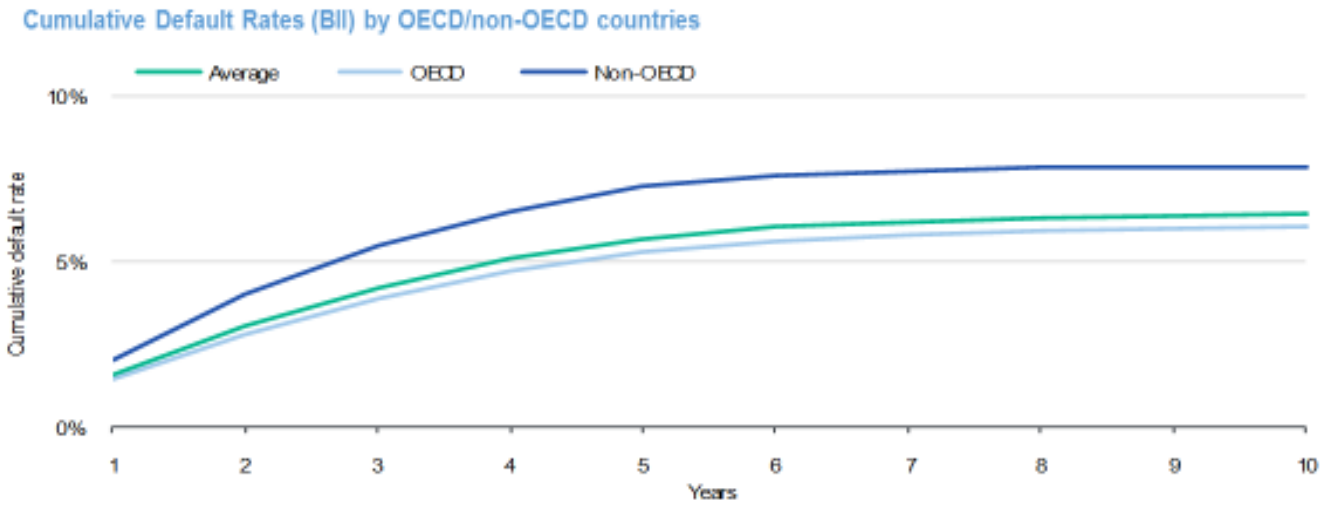
PROBLEM IS INVESTORS WANT TO INVEST IN THIS….

INVESTMENT NEEDED IN THIS….



DEFAULTS AND RECOVERY RATES

Default and recovery history - OECD/non-OECD countries



For OECD projects

- The 10 year cumulative default rate (BII) is 6.1%
- The average ultimate recovery rate is 80.1%
- Average of 2.0 years to emerge from default

For non-OECD projects

- The 10 year cumulative default rate (BII) is 7.9%
- The average ultimate recovery rate is 80.9%
- Average of 2.9 years to emerge from default

Resilient credit strength of project finance transactions in emerging markets

Source: Moody's Investor Service

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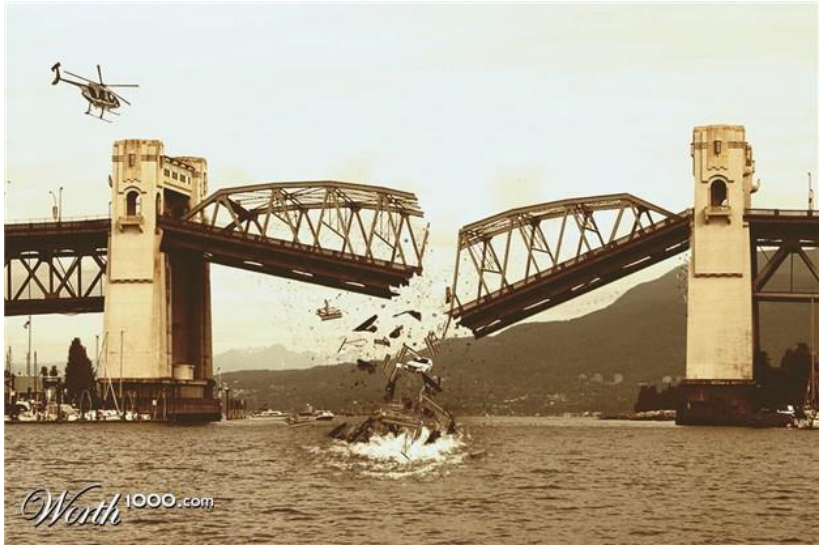
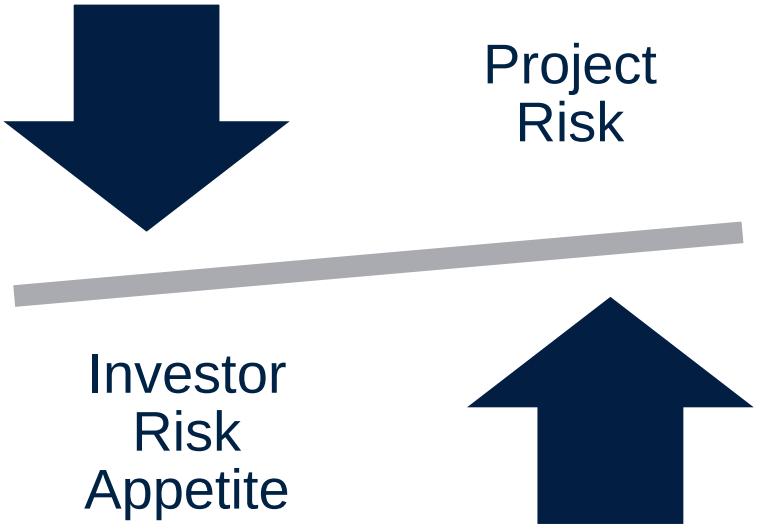
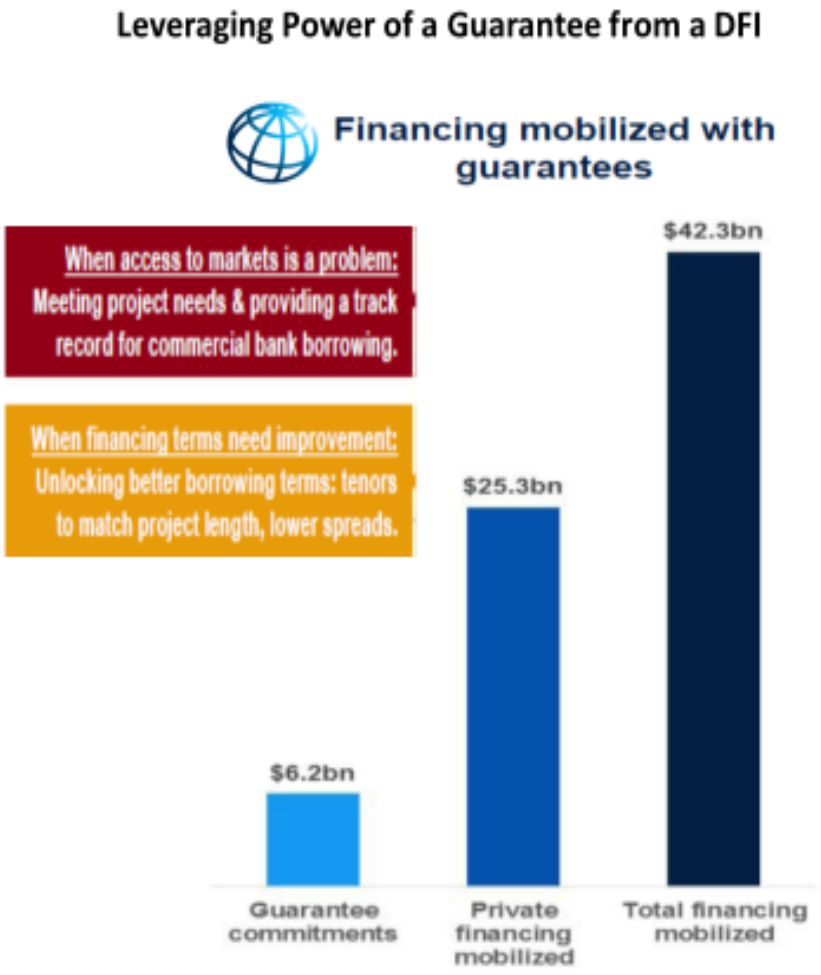
HOW TO BRIDGE THE GAP?



OUR ROLE AT THE WORLD BANK IS TO HELP GET TO THIS EQUILIBRIUM



LEVERAGING POWER OF GUARANTEE FROM DFI

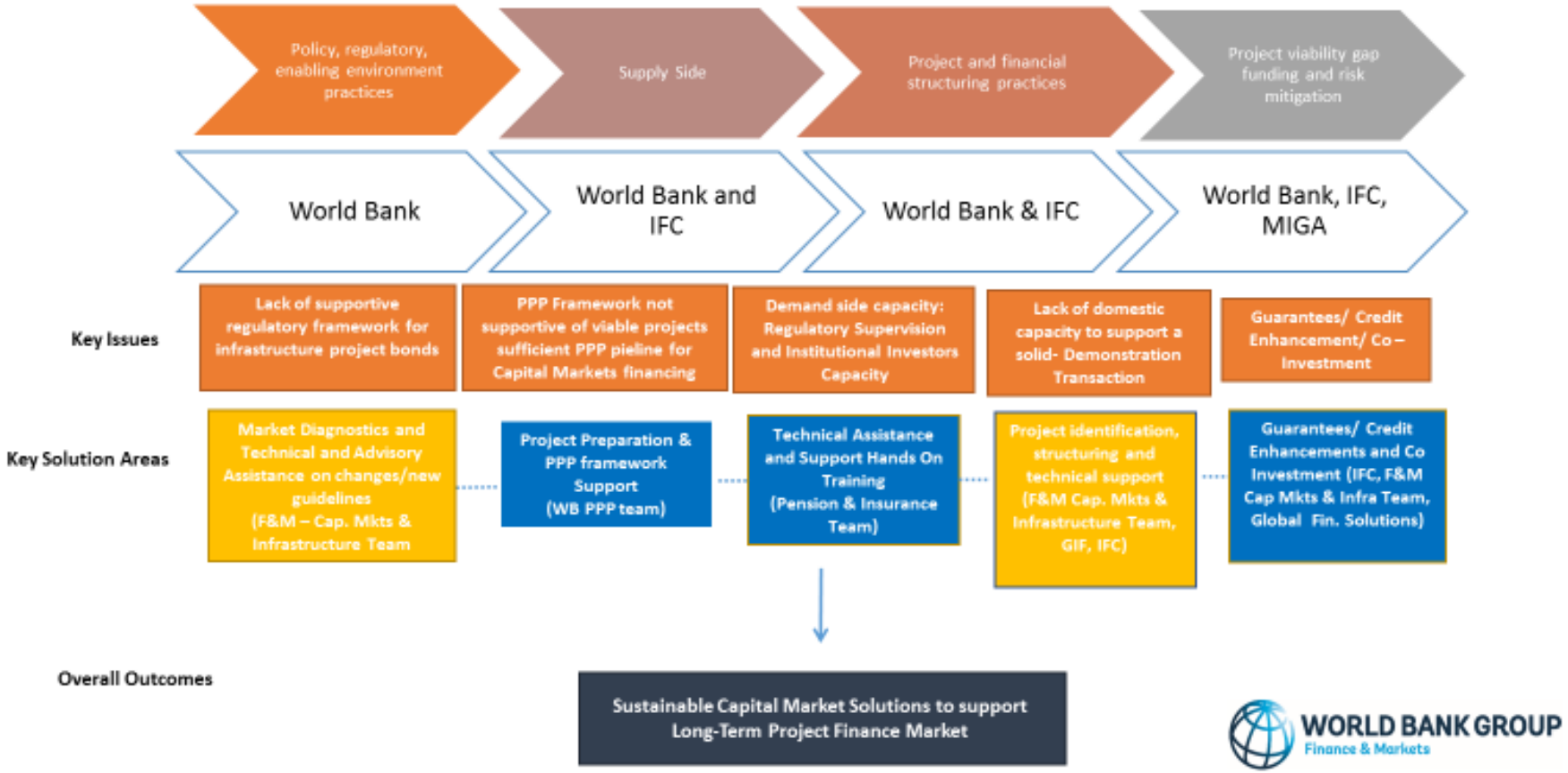


Trends in Financing Infrastructure through Capital Markets

- Due to the aftermath of the 2008 GFC, capital remains more constrained with financing channeled to more targeted countries (e.g. low income) and sectors.
  - Focus is on creating a catalytic effect
  - Leverage on technical teams and global experiences to create innovative solutions suited to the local context
  - Guarantees & Credit Enhancement: Products to de-risk projects and help mobilize commercial financing.
  - Long-term sustainable solutions; capacity building and successful demonstration models/instruments
  - Integrate different areas of support from the WBG: e.g. IFC, Energy and Transport GPs

WBG ROLE

WBG Areas of Support on Capital Market Solutions for Infra-Finance



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WHAT ARE THE ROAD BLOCKS TO MATCHING INSTITUTIONAL INVESTORS + INFRASTRUCTURE?

ROADBLOCK ‘MYTHS’ = PENSION FUNDS CAN’T….

#1… take on construction risk

- Can with expert partners who can monitor

ROADBLOCKS - PENSION FUNDS CANT……

#1… take on construction risk

- Can with expert partners
- In emerging markets need to for yield

#2… invest in illiquid assets

- Rated/ listed instruments can be created

ROADBLOCKS PENSION FUNDS CANT……

Myth #1… take on construction risk

- Can with expert partners
- In emerging markets need to for yield

Myth #2… invest in illiquid assets

- Small % portfolio
- Rated/ listed instruments can be created

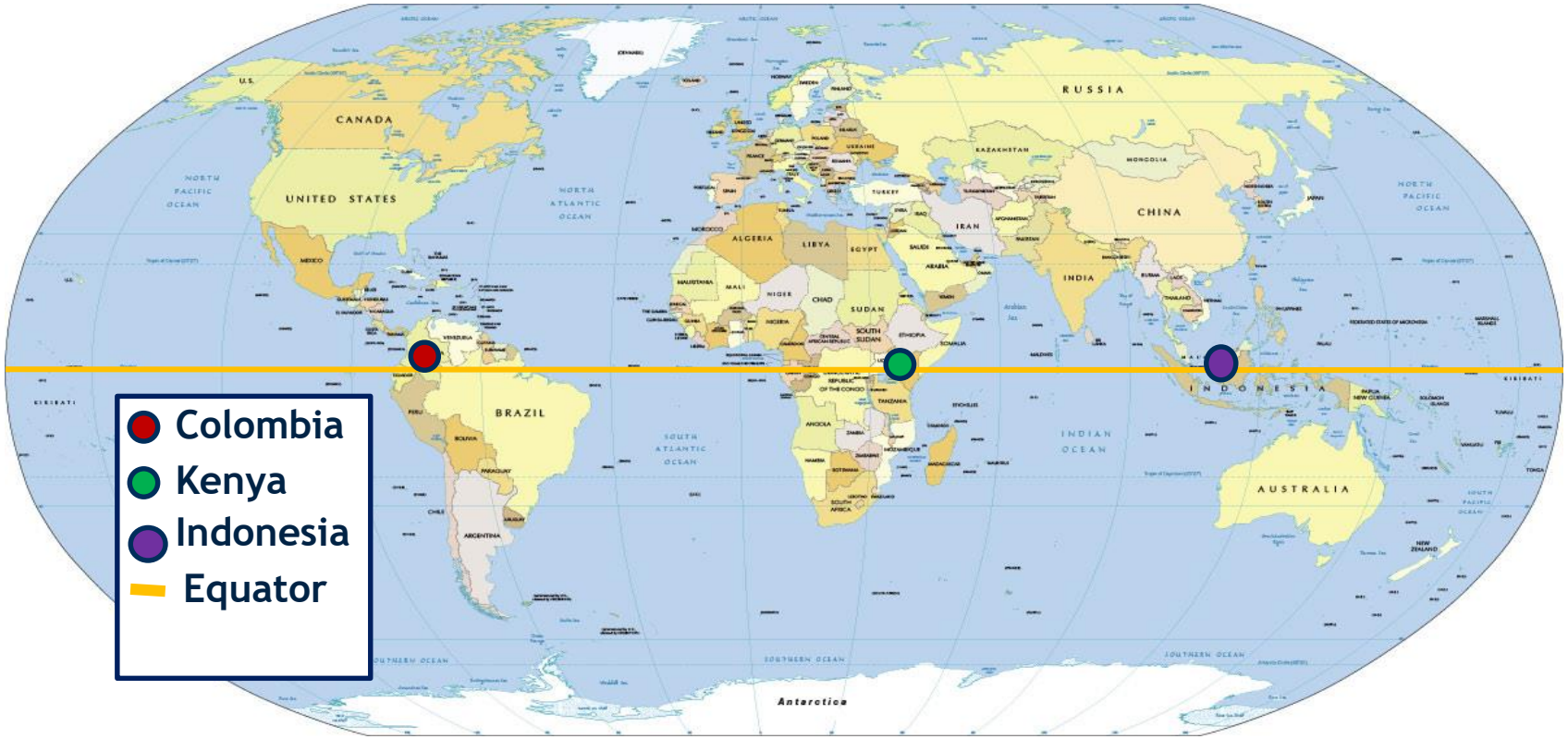
#3…invest due to regulation

- Regulators open to amendments

INVOLVE INSTITUTIONAL INVESTORS FROM *START* OF PROJECT

- Capital market instruments complex to create
- Easier to go to banks
- Need to make space for local currency financing

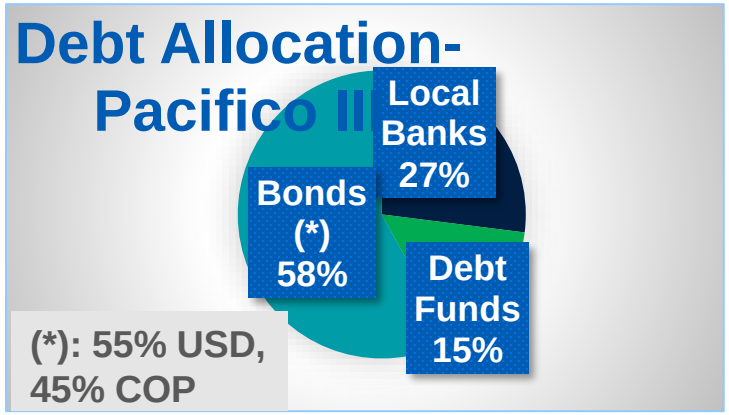
TRANSFERING LESSONS……

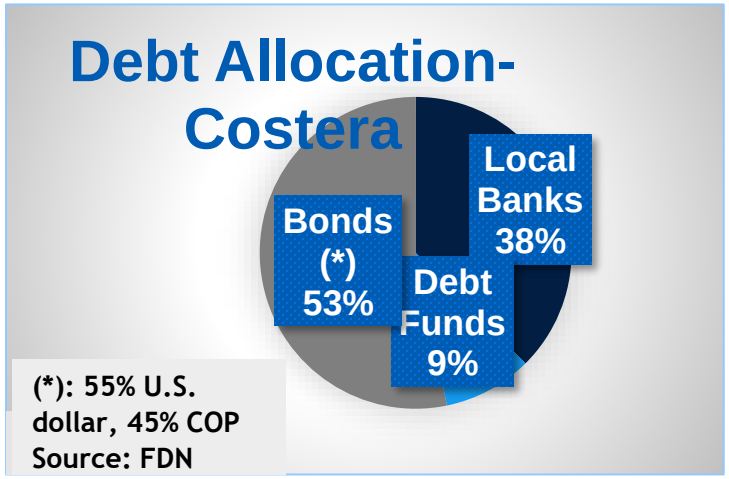


COLOMBIA

ATLANTIC OCEAN
Caribbean Sea
Golf of Venezuela
Darien Gulf
Maracaibo Lake
NORTH PACIFIC OCEAN
PANAMA
PANAMÁ
VENEZUELA
BRAZIL
PERU
Aruba (NETH.)
Aruba
Oranjestad
Willemstad
Curaçao
Bonaire
Netherlands Antilles (NETH.)
Caracas
Puerto Bolivar
Riohacha
Santa Marta
Barranquilla
Valledupar
Maracaibo
Cartagena
Valencia
Barquisimeto
San Juan de Los Morros
San Carlos
Covenas
Sincelejo
Monteria
Armila
Yaviza
Turbo
Carepa
Merida
Cucuta
San Cristobal
Barrancabermeja
Bucaramanga
Puerto Berrio
Juradó
Bahia Solano
Medellin
Quibdó
Arauca
Puerto Páez
Puerto Carreno
Puerto Ayacucho
Paz de Rio
Tunja
Puerto Salgar
Manizales
Yopal
Santa Rita
Pereira
Armenia
BOGOTÁ
Ibaque
Tolemaida
Villavicencio
Tulua
Buenaventura
Cali
Barrancomina
Puerto Inirida
Neiva
Popayan
San Vicente del Caguán
San José del Guaviare
Tumaco
Florencia
Calamar
San Lorenzo
Pasto
Larandia
Mocoa
Mitú
Esmeraldas
Tulcan
Ipiales
Santa Ana
Puerto Asis
Tres Esquinas
San Miguel
La Tagua
Puerto Leguizamo
Puerto Santander
La Pedrera
El Encanto
Iquitos
Amazon
Leticia
ATLÁNTICO
LA GUAJIRA
CESAR
MAGDALENA
SUCRE
CÓRDOBA
BOLÍVAR
NORTE DE SANTANDER
SANTANDER
ANTIOQUIA
CHOCÓ
CALDAS
RISARALDA
QUINDÍO
BOYACÁ
CUNDINAMARCA
TOLIMA
HUILA
VALLE DEL CAUCA
CAUCA
NARIÑO
PUTUMAYO
CASANARE
ARAUCA
VICHADA
META
GUAINIA
GUAVIARE
CAQUETA
VAUPES
AMAZONAS
District Capital
COLOMBIA
National Capital
Department Capital
Town, Village
Major Airport
International Boundary
Administrative Boundary
Main Road
Secondary Road
0 100 200 Kilometers
0 100 200 Miles
© Nations Online Project

COLOMBIAN STRUCTURE: CO-FINANCING BETWEEN BANKS AND INSTITUTIONAL INVESTORS





1. $20 bn Toll Road PPP program, too large to be fully financed by international and local banks.

2. 10 out of 40 projects reached financial close; 2 of them have significant LCY funding from local pension funds

3. Pension funds invested through
   - ✓ Infrastructure Debt Funds with IFC co-investing
   - ✓ Infrastructure Project Bonds

4. Key features of the capital structure:
   - Hybrid-financing model: a syndication of bank loans at shorter maturities (12 years) and the debt fund (both loans and project bonds) at longer maturities (19 years).
   - Bond financing was a combination of LCY and Hard Currency
   - International investors participated in both the USD and LCY bonds

KENYA

KENYA
National capital
Provincial capital
Town, village
Airports
International boundary
Main road
Secondary road
Other road or track
Railroad
SOUTH SUDAN
ETHIOPIA
UGANDA
SOMALIA
UNITED REPUBLIC OF TANZANIA
INDIAN OCEAN
Lake Turkana (Lake Rudolf)
Lake Chew Bahir
Nairobi
Mombasa
Kisumu
Eldoret
Nakuru
Garissa
Kilimanjaro 5895 m
Mt. Kenya 5199 m
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CONTEXT IN KENYA

Infrastructure needs in Kenya are vast: about $4 bn per year (6% of GDP)

The GoK is committed to a solid (PPP) program being prepared since 2012: about $3-4 bn of toll road projects coming to market (WB IFPPP Loan)

Significant progress made on PPP; first 5 mover PPP road projects coming to market with one already @ RFP stage

Pressure on public debt

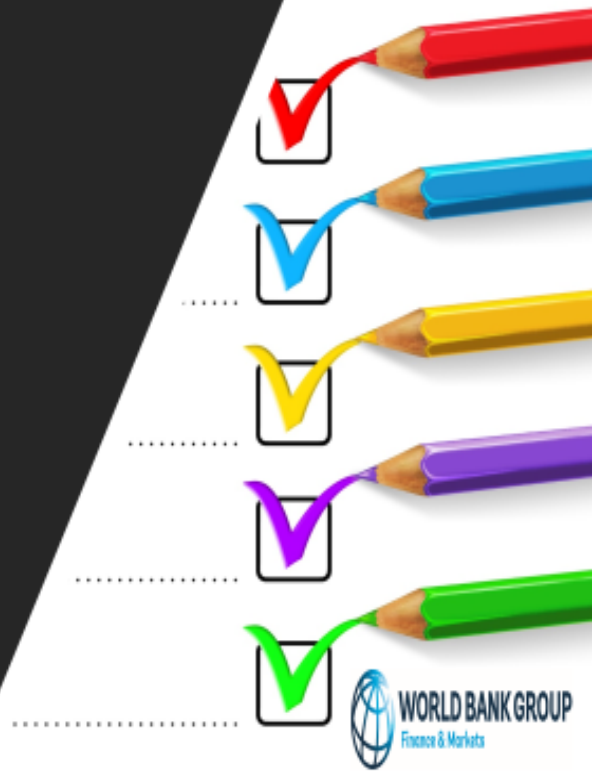
Critical to finance part of the debt of these projects in local currency for:

- Cost and sustainability of PPP program
- Opening up new assets for domestic investors
- Capital markets deepening

CONTEXT IN KENYA

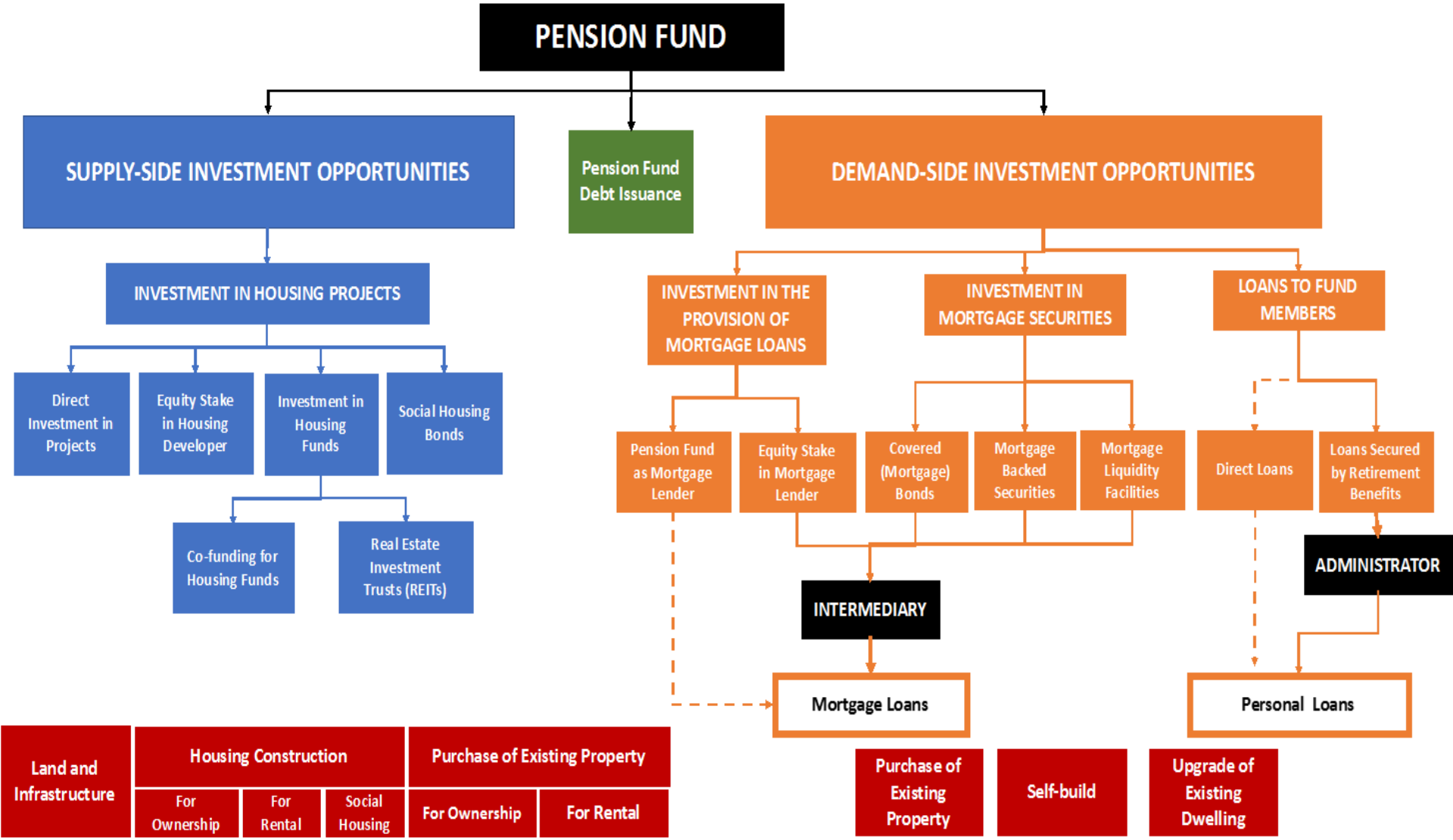
Kenya has the pre-conditions to crowd-in institutional investors into infrastructure

- Pipeline of well-structured PPP projects
- Institutional investors are sizeable (assets under management at 18% of GDP)
- GoK commitment to implement enabling environment changes as necessary. Open dialogue to address:
  - Market concerns on PPP "safeguards" and contractual arrangements
  - Capital markets and investment regulations
  - Reforms in the sovereign debt markets
- International interest (sponsors and debt financiers) in investing in Kenya alongside domestic investors
- Strong support from Development Finance Institutions: quality control, credit enhancement and co-investment



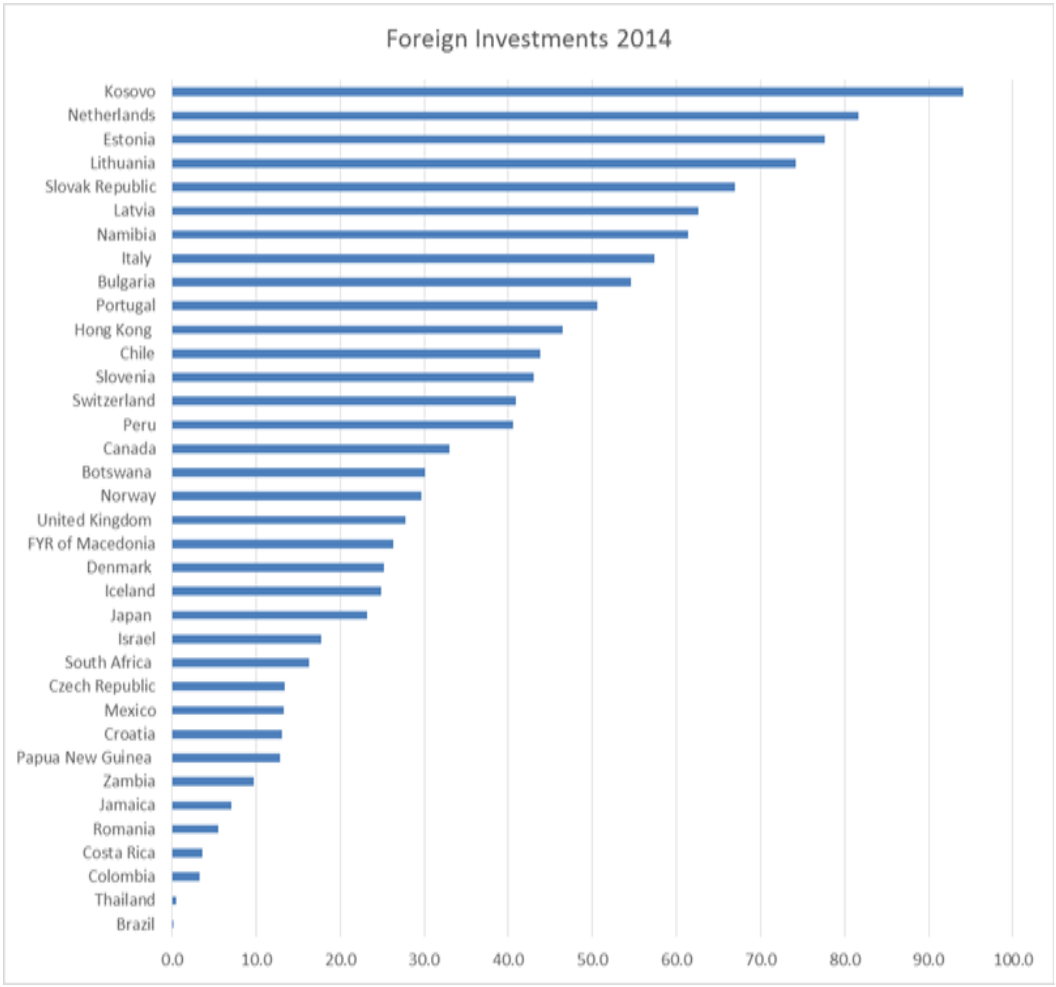
HOUSING

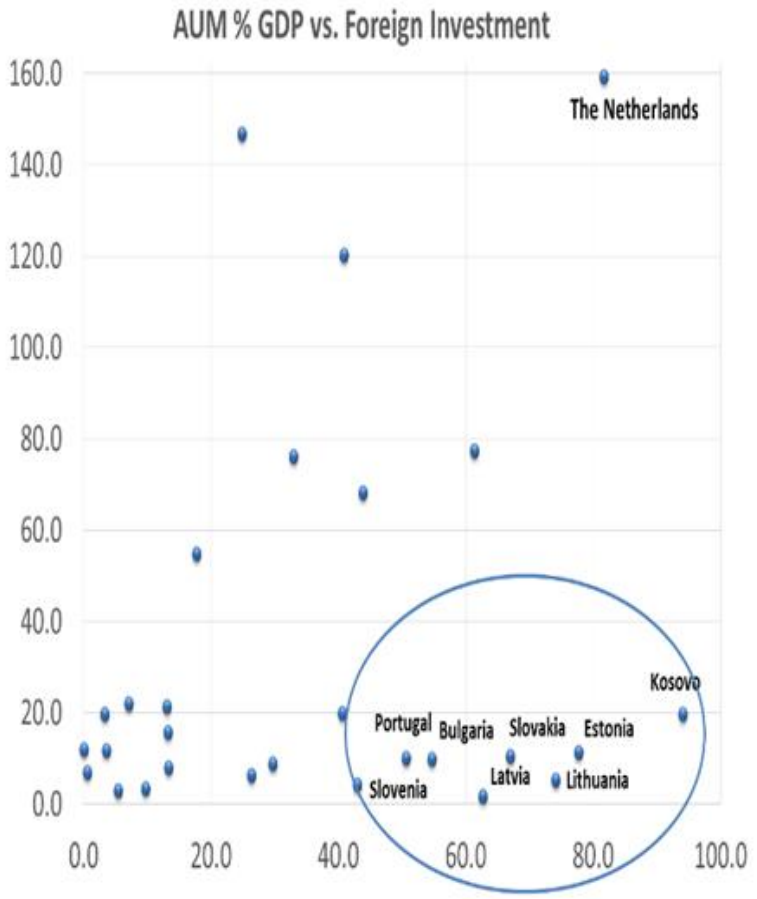
PENSION FUNDS + HOUSING



INTERNATIONAL DIVERSIFICATION

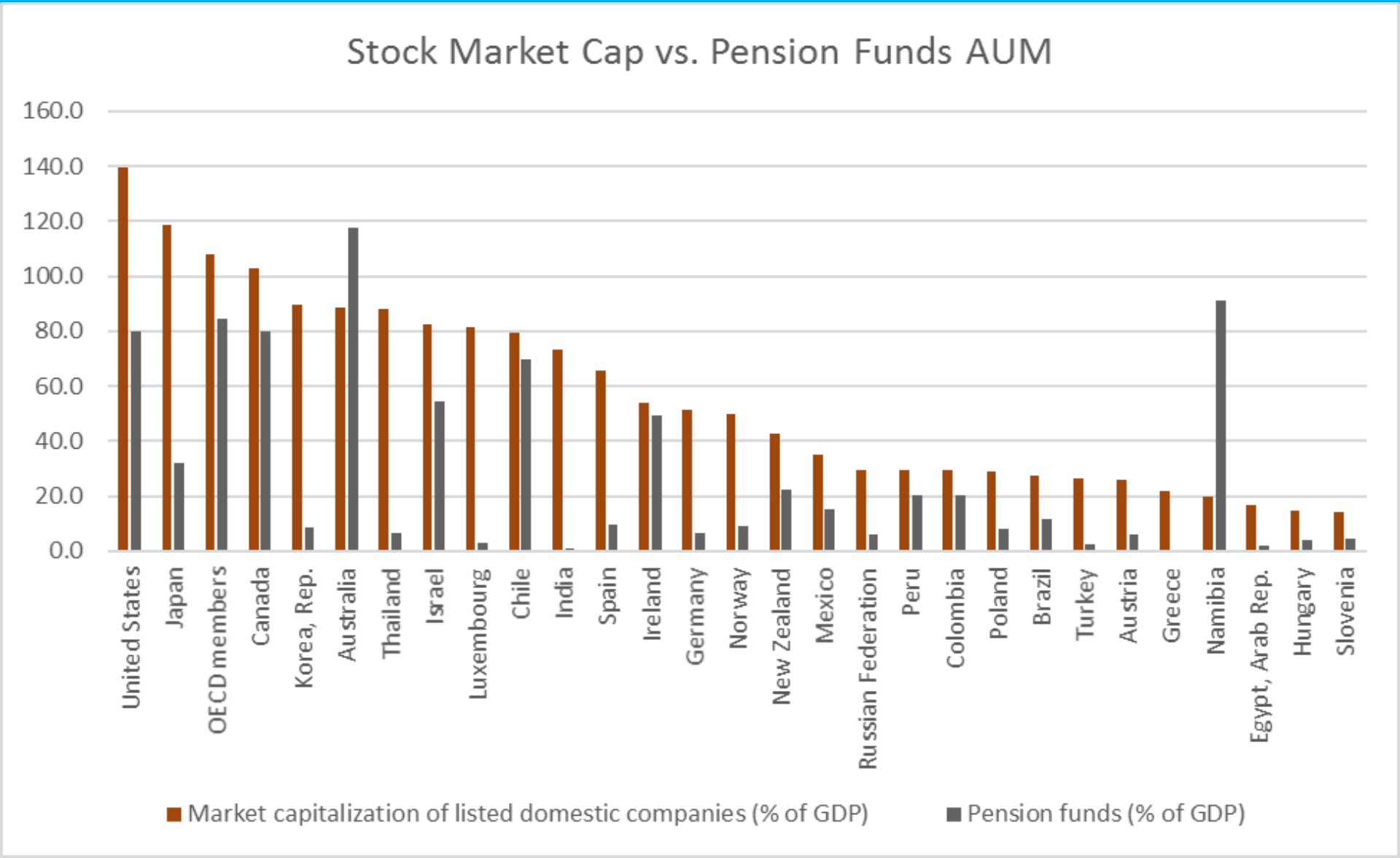
INTERNATIONAL DIVERSIFICATION





Source OECD (2015a)

BALANCE LOCAL DEVELOPMENT + INTERNATIONAL DIVERSIFICATION

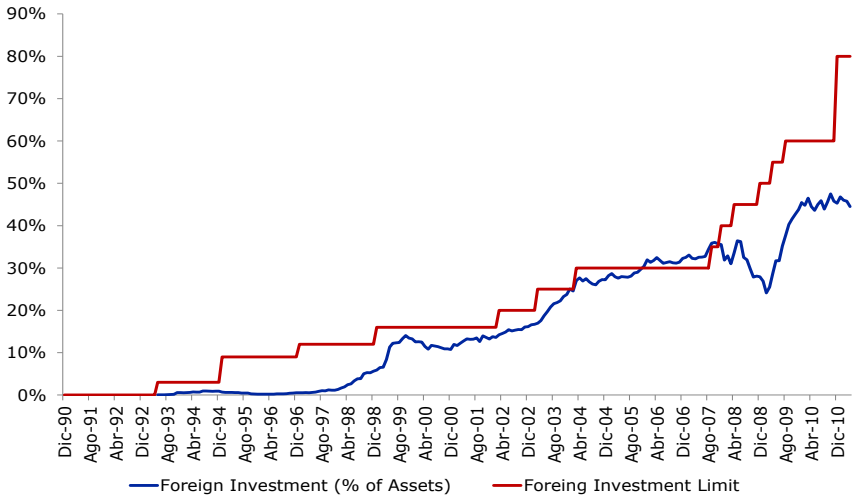


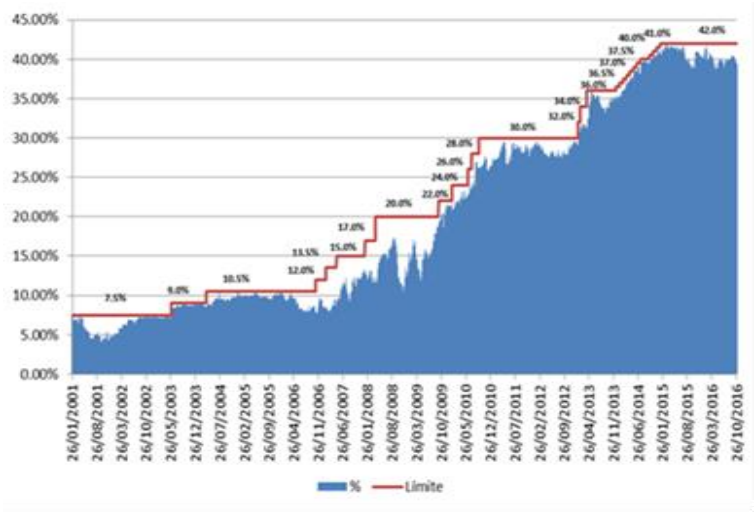
CHILE – INTERNATIONAL DIVERSIFICATION

- Relaxing of the domestic investment requirement coincided with the increase in pension fund assets as a percentage of GDP
- Given the mandatory level of savings, pension assets were seen to be increasing beyond the capacity of domestic markets to absorb
- South Africa have linked overseas limits + capital flows

Development of Investment Abroad vs. Investment Limits

Chile + Peru

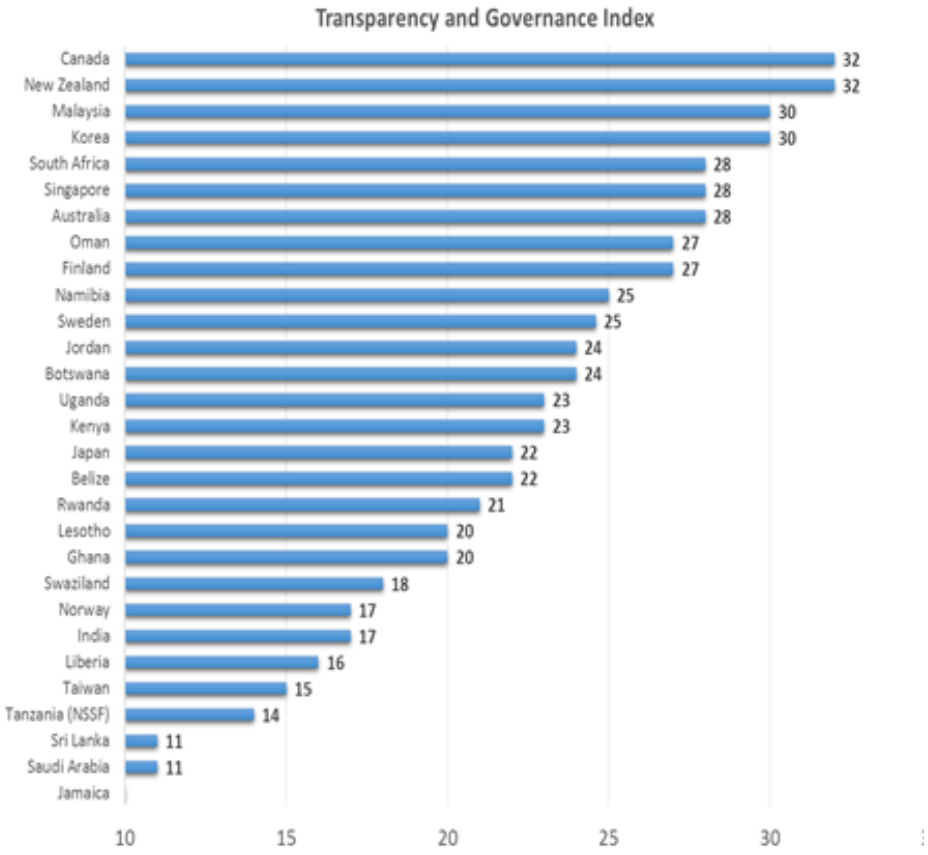


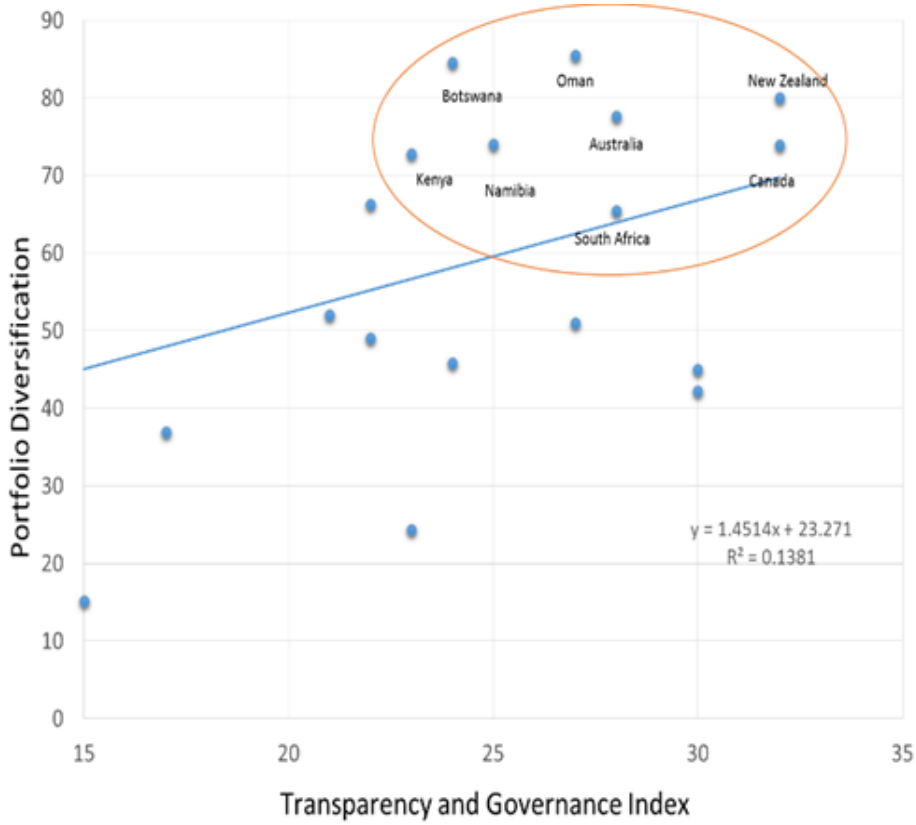


Source: Supintendencia

CONCLUSIONS

GOVERNANCE + INVESTMENT LINKED





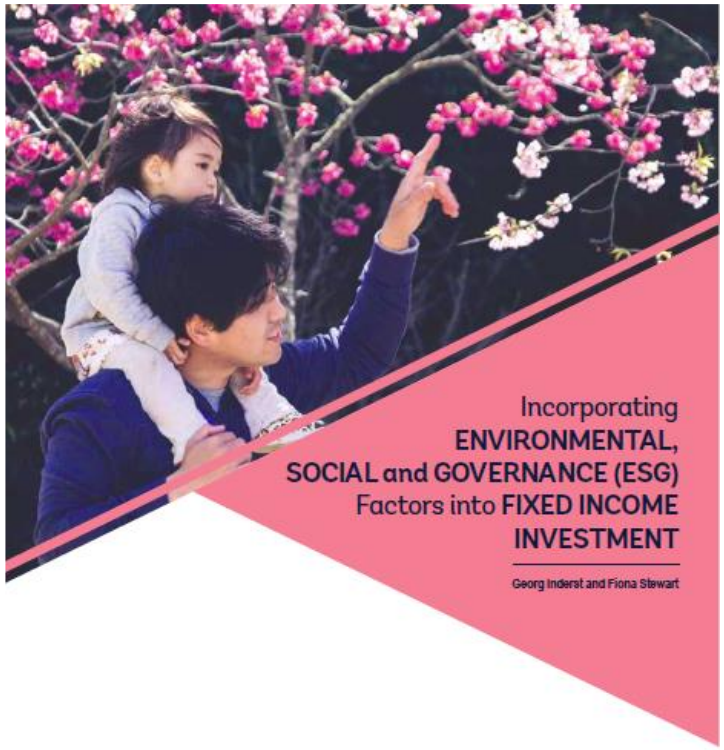
CONCLUSION

- High interest rate environment in many developing economies is prevent diversification of pension assets into productive local investments

- Regulation can act as additional disincentive to move into longer term assets

- Regulatory/ Supervisory authorities have a role to play
  - *Create safe but supportive regulatory environment*
  - *Help create secure investment vehicles which allow pension funds to access domestic investment opportunities securely (i.e. with proper intermediation)*
  - *Systemically allow some international diversification based on local economy's capacity to absorb pension assets*

ESG



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Main findings from academic research

Academic research….

…provides rationale for taking ESG into account

Performance corporate bonds

Key findings	Supporting research
Bonds with high ESG ratings have modestly outperformed their lower rated peers	• **S. Polbenikov, A. Desclee, L. Dynkin, and A. Maitra (…). ESG Ratings and Performance of Corporate Bonds.** The authors study the historical relationship between ESG ratings and corporate bond spread and performance, finding that corporate bonds with high composite ESG ratings have slightly lower spreads, all else being equal. They also find that bonds with high ESG ratings have modestly outperformed their low rated peers when controlling for various risk exposures. They provide details on the effects of individual E, S, and G scores on performance. The outperformance of low-ESG issuers by their high ESG peers through the past eight years has not been accompanied by increasing relative valuation. This suggests that the ESG performance gain is not a consequence of buying pressure and therefore might be retained.
In fixed income, ESG issues are mostly about risk	• **Environmental, Social, and Governance Issues in Investing: A Guide for Investment.** ESG analysis in fixed income considers how such issues as carbon emissions, labor relations and corruption might affect issuers' creditworthiness. A useful reminder is the case of the mining company Lonmin. After violent labor conflicts in Marikana, South Africa, in 2012, the company was forced to issue a warning regarding the servicing of its debt. Thus, risk pertaining to social issues, which could easily be overlooked in a traditional financial analysis, could also prove costly for fixed-income investors. • **Hau and Chen (2015).** Socially responsible firms usually perform better in terms of their credit ratings and have lower credit risk. The findings demonstrate the importance of considering both positive and negative ESG performance. Positive ESG ratings are associated with reduced financial risk while negative ESG performance scores lead to increased financial distress. Investors respond to positive ESG ratings. • **Freide, Bush, Bassen (2015).** Extensive literature review of 2200 individual studies of ESG in all asset classes and

Performance sovereign bonds

Key findings	Supporting research
E, S, G components correlation with sovereign credit strength defaults	• **Goss (2009).** Finds a significant negative relationship between ESG scores (KLD STATS) and financial distress as measured by probability of default. • **Oikonomou (2014).** Higher levels of ESG lead to default risk. Higher ESG strengths lead to higher S&P bond ratings and lower credit spreads. • PRI (2013). In contrast to ESG analysis for listed equities, social factors tend to be given greater weight than environmental factors because of links between political stability, governance and countries ability to raise taxes or make reforms. Corporate governance fators can have strong links to credit strength. Corporate scandals linked to fraud and bribery frequently lead to punitive fines, loss of licence to operate and greater scrutiny from regulators. Conversely, well-managed companies tend to be more aligned with bondholder interests, while corporate transparency keeps bondholders better informed of exposures. • **Union Investment (2014)** assess corruption as a key indicator of sovereign credit strength because of the relationship between fraud, tax avoidance, financial management and an issuer's ability to repay its debt obligations. There are strong correlations between corruption and the number of sovereign defaults. • **Lazard (2012). Giving Credit Where It's Due ESG Factors in EM Sovereign Debt.** The study verifies a clear correlation between a country's bond performance and the strength of its institutions and governance and goes further to quantify the impact of ESG factors on a country's credit spread. High institutional quality is associated with a low frequency of sovereign default and polarized governments tend to default more frequently. • **IMF.** Determined that structural reformes aimed at enhancing date transparency resulted in more reliable macroeconomic and financial data, which in turn improved access to international capital markets and lowered spreads for emerging markets countries. The IMF also found that countries that subscribed to its data standards experienced a 15% reduction in spreads one year after the implementation of these reforms. • **The Asian Development Bank.** Found that good governance is associated with both a higher level of per capita GDP and higher GDP growth over time

Other

Key findings	Supporting research
Duration of ESG bonds	• **PRI (2014).** Different ESG factors will present greater risks over different time periods. In the short term investors face a greater threat from the fallout of low-frequency, high impact events such as extreme weather or industrial disasters. Beyond 15 years, ESG trends, such as demographic changes and climate change, are likely to have a significant impact on bond yields, but the extent of this is not yet clear. While there may be little difference between ESG analysis for three- and five-year bonds, there is a stronger argument for duration-weithed ESG analysis between two- and ten-year bonds
Examples of emerging market debt investors	• **Neuberger Berman (2013). ESG factors in sovereign debt investment.** Neuberger Berman's team evelualeing ESG scores for emerging market started with a list of 40 or 50 indicators and shortened that to 15. It back-tested all of them looking at a pool of 65 issuers over a 10-year period to find out which were most effective. The model includes 40% of ESG factors score and the remaining 60% consists of macroeconomic factors for a country. Thus the model can monitor these factors consistently and on a standardized basis within the investment process. For example, if they see corruption, rule of law, political stability going south, wwhile movement in the macroeconomic indicators was either neutral or positive, then they adjusted the exposure.

Incorporating ESG factors does not mean sacrificing return

ESG factors are material credit risk

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MAIN FINDINGS FROM ACADEMIC RESEARCH

- Many studies researching the empirical link between ESG and financial indicators
- Previously much research focused on equities (Dimson et at. 2013 summary)
- Recently more studies on fixed income published
- (Friede et al. 2015) – comprehensive study of 2,200 studies
  - 90% find non-negative relation between ESG and corporate financial performance
  - Bond studies (36) almost 2/3 positive 1/3 neutral or mixed

UN PRI (2017) SUMMARY

- Both academic and market research supports clear link between ESG factors and credit risk
- Most academic research is based on credit ratings to measure credit risk – very few papers use alternative measures (such as credit default swaps)
- Anecdotal observation of corporate defaults (particularly investment-grade) show strong G link – E + S harder to capture
- Academic research linking ESG factors + sovereign credit worthiness less well supported – but is much evidence that ESG factors impact macroeconomic variables and potential growth – which in turn impact sovereign credit ratings

QUALIFYING FACTORS

- Most ESG research use past data – may not hold in future
- May be (selection and other) biases in research
- Structure of economies and markets change over time, as do policies – investors need to make forward looking decisions
- Research on ESG in fixed income is still very limited – most focused on credit risks
- Still little analysis of ESG factors + market risks, inflation, liquidity and other risks/ opportunities
- Investors are advised to apply their own additional research and insights

LEADS TO 1ST MAJOR TREND…

ESG is increasingly incorporated into mainstream investment

Organizational embedding

- **ESG factors are increasingly considered by all analysts – not just separate ESG teams**

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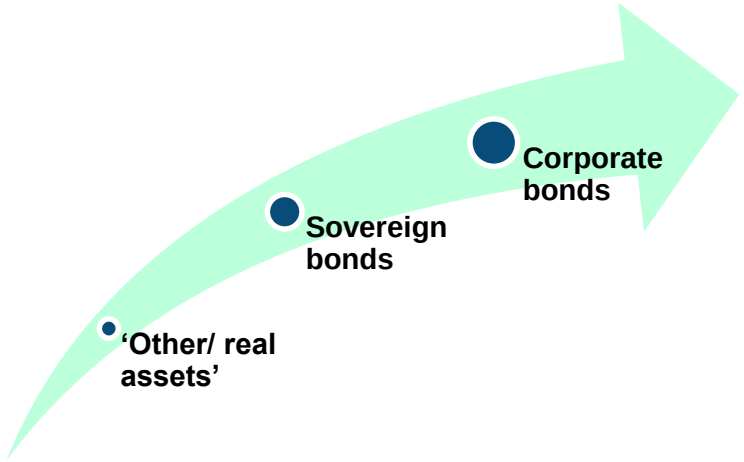
Catching up

- **Fixed income is catching up fast with equity**



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2ND MAJOR TREND

ESG + Impact investing is starting to merge

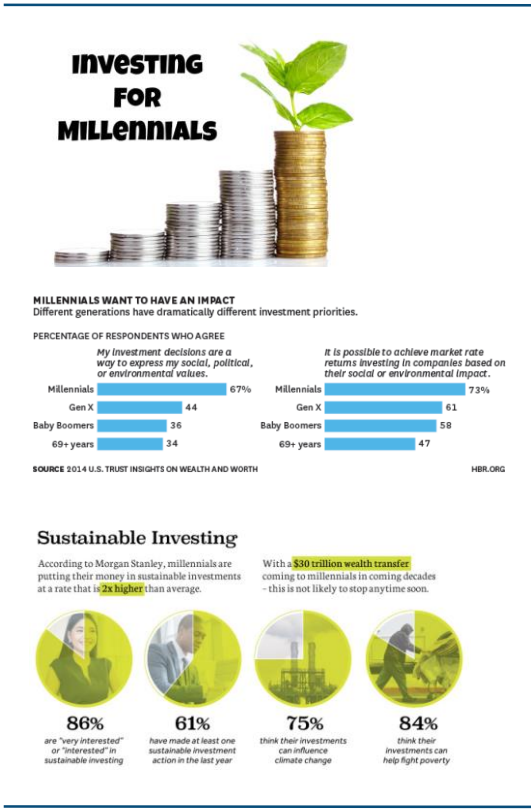
showing ESG impact on credit ratings

performance

- Define Impact investing as a positive

2ND MAJOR TREND

Millennials & SDGs are driving factors



Impact investing

SDG impact indicators
A guide for investors and companies

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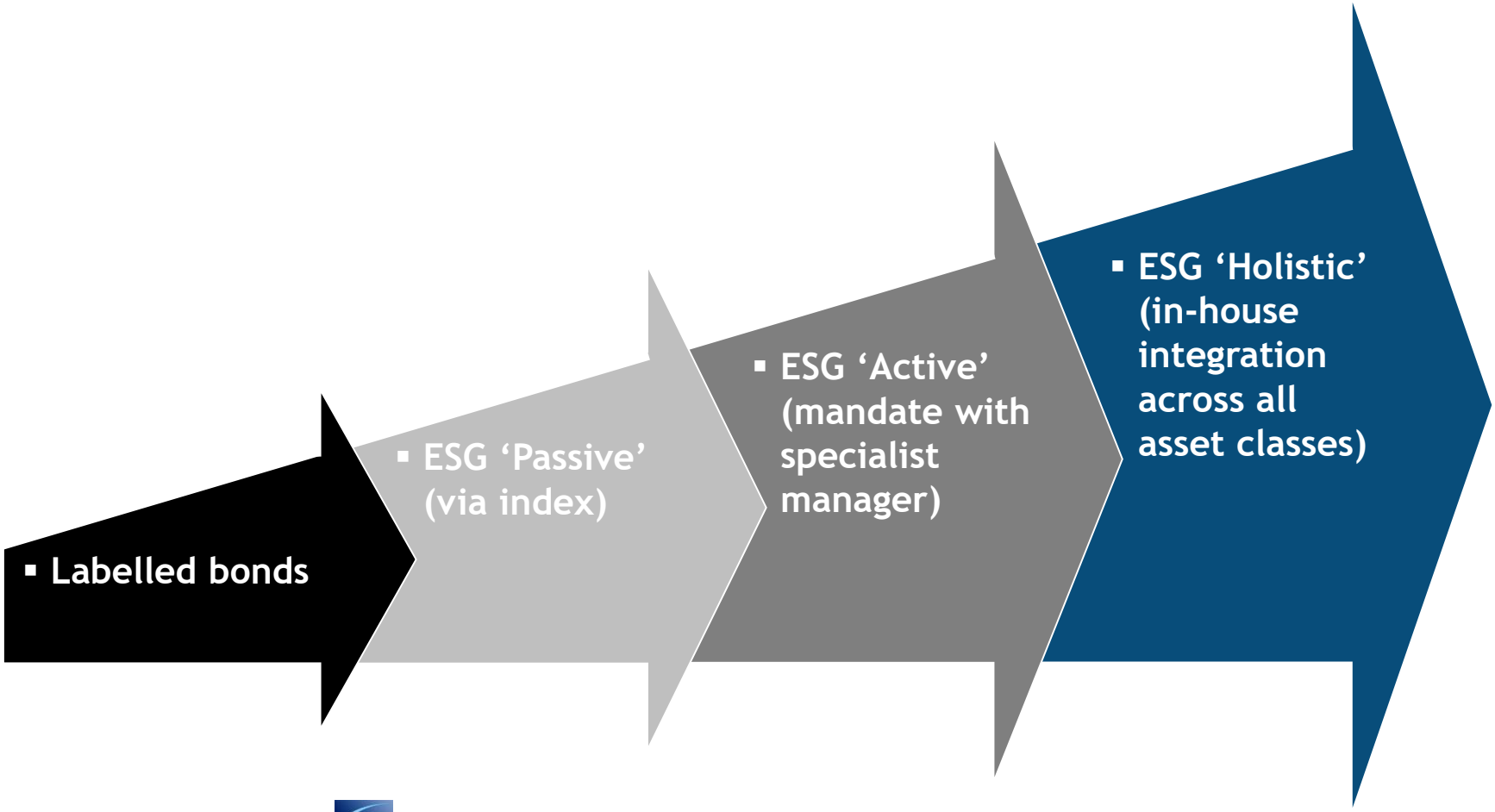
How is ESG implemented by fixed income investors?

Implementation tools / approaches



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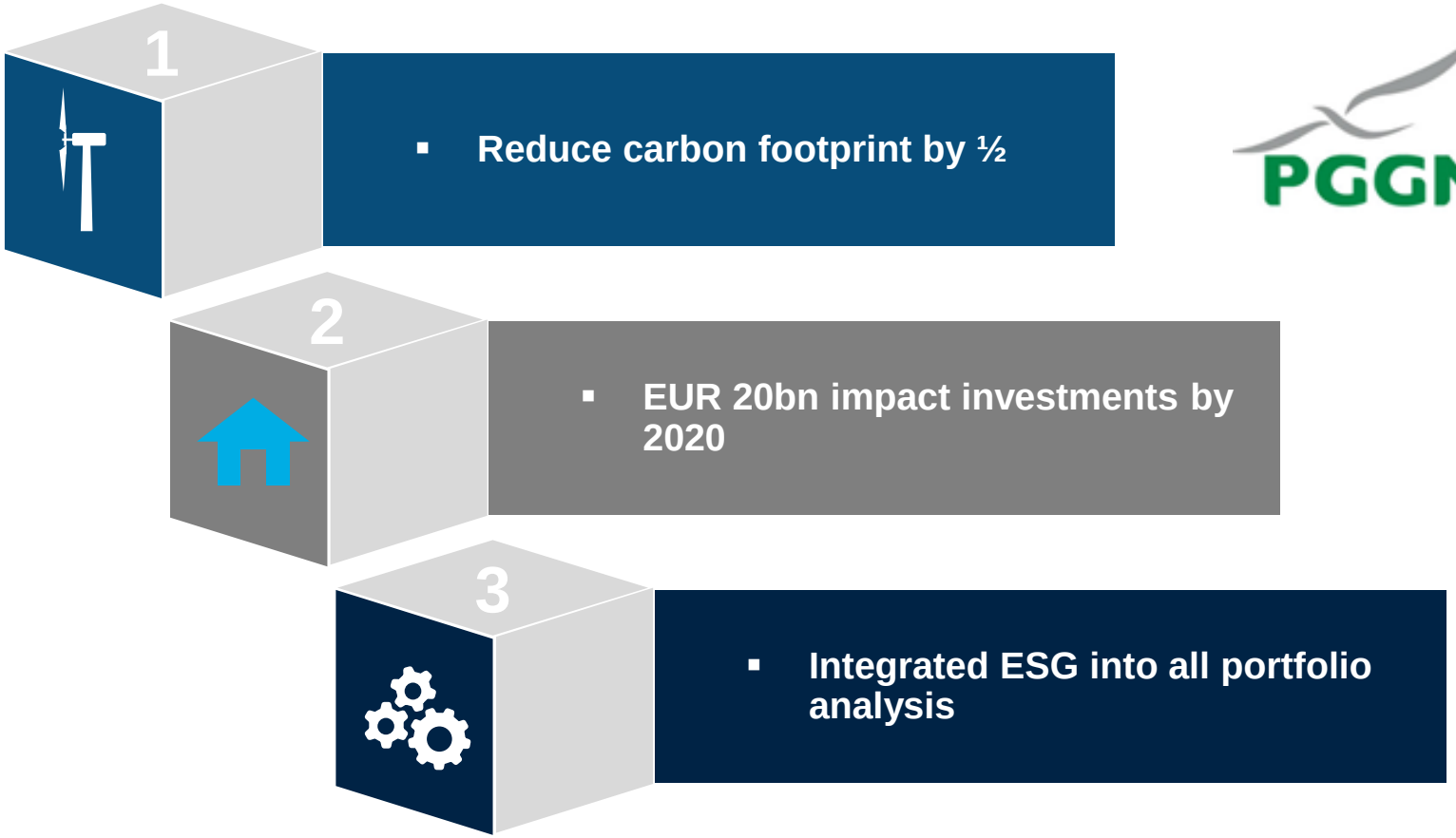
How is ESG implemented by fixed income investors?

Example of PGGM: use more than one tool



PGGM

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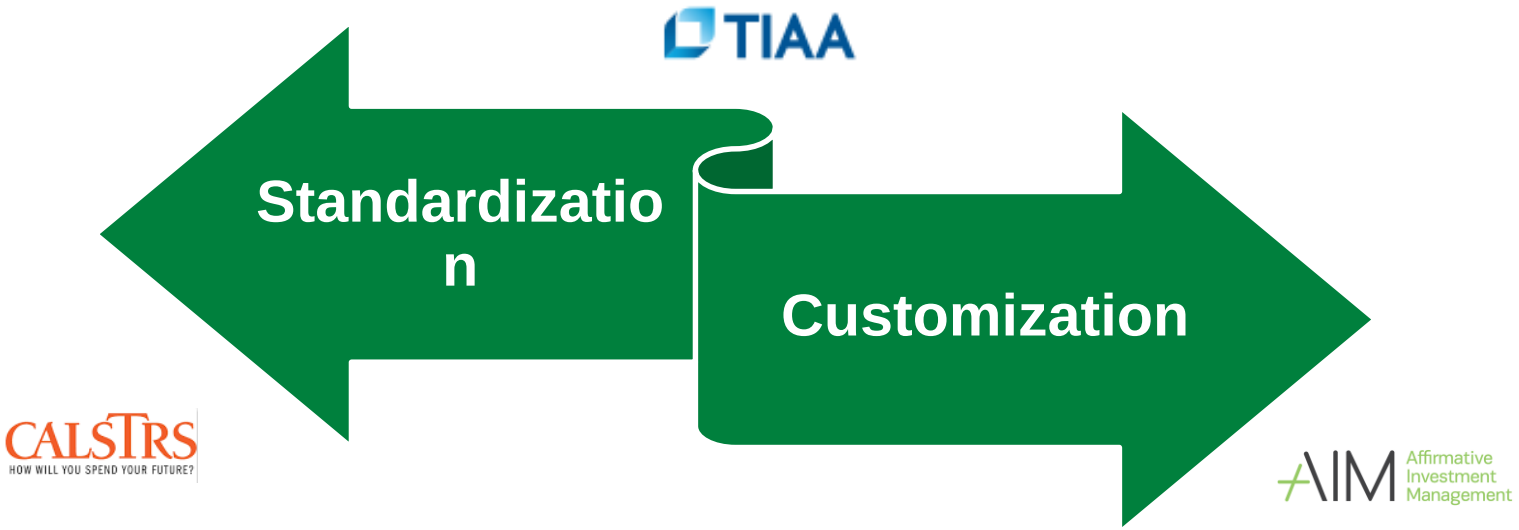
3rd Major Trend

Standardization vs customization

- Methodologies can be used as tool or overlaid with investors own ‘philosophy’



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Outstanding challenges

Despite evidence and will…. Still outstanding implementation challenges

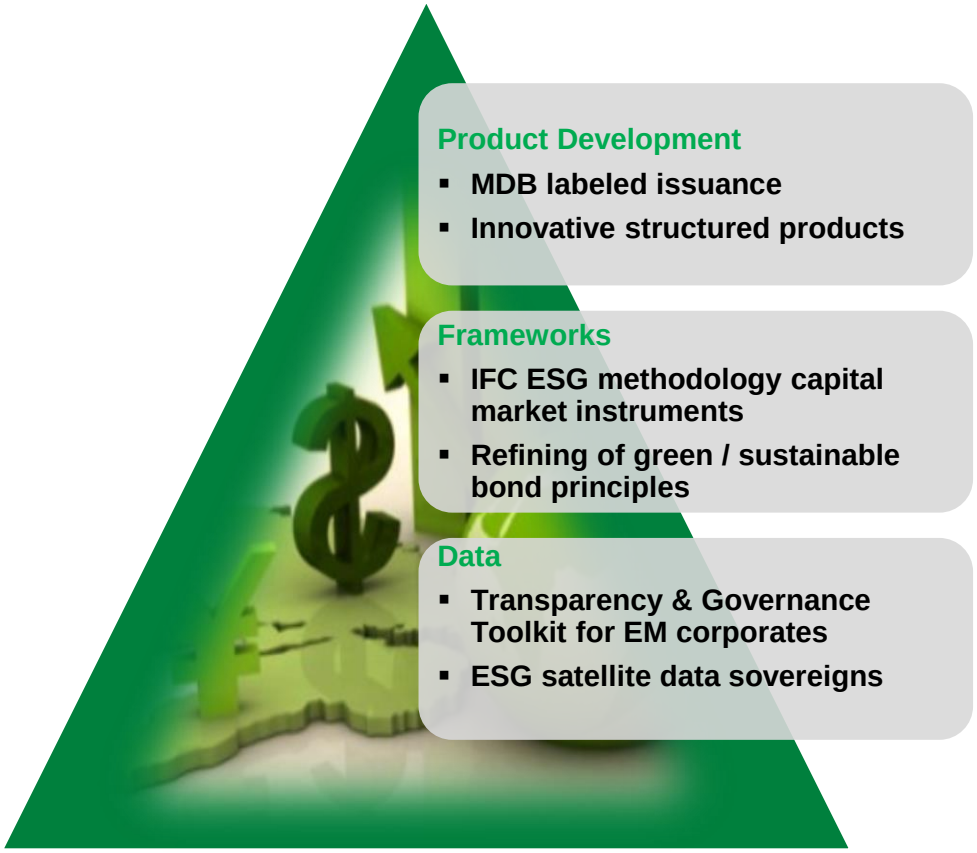
- **Data is improving (corporate reporting) + lots of innovative sources (satellite data/ AI)… BUT still lacking in smaller markets and rests on surprising small number of specialists**

- **Many different definitions of ESG (particularly S)… leads to many implementation strategies / methodologies**

- **Lack of investment instruments which meet needs/ intentions**

Breakdown ESG components			
Institution	**E**	**S**	**G**
CFA Institute	Climate change and carbon emissions	Customer satisfaction	Board composition
	Air and water pollution	Data protection and privacy	Audit committee structure
	Biodiversity	Gender diversity	Bribery and corruption
	Deforestation	Employee engagement	Executive compensation
	Energy efficiency	Community relations	Lobbying
	Waste management	Human rights	Political contributions
	Water scarcity	Labor standards	Whistleblower schemes
MSCI	Carbon emissions	Labor management	Corporate governance
	Energy efficiency	Diversity and discrimination	Business ethics
	Natural resource use	Working conditions	Anti-competitive practices
	Hazardous waste management	Employee safety	Corruption and instability
	Recycle material use	Product safety	Anti-bribery policy
	Clean technology	Fair trade products	Anti-money laundering policy
	Green buildings	Advertising ethics	Compensation disclosure
	Biodiversity programs	Human rights policy	Gender diversity of board
PRI Principles for Responsible Investment	Carbon intensity	Demographics	Institutional strength
	Water stress	Education and human capital	Corruption
	Energy resources and management	Health levels	Regime stability
	Natural disasters	Political and press freedoms	Rule of low
	Biocapacity and ecosystem quality	Human rights	Financial reporting
	Pollution	Labor standards	Regulatory effectiveness
	Biodiversity	Social exclusion	Adherence to conventions
	Agriculture	Income inequality	International relations

How Can World Bank work with GPIF to catalyze continued mainstreaming on ESG into Fixed Income Portfolios?



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