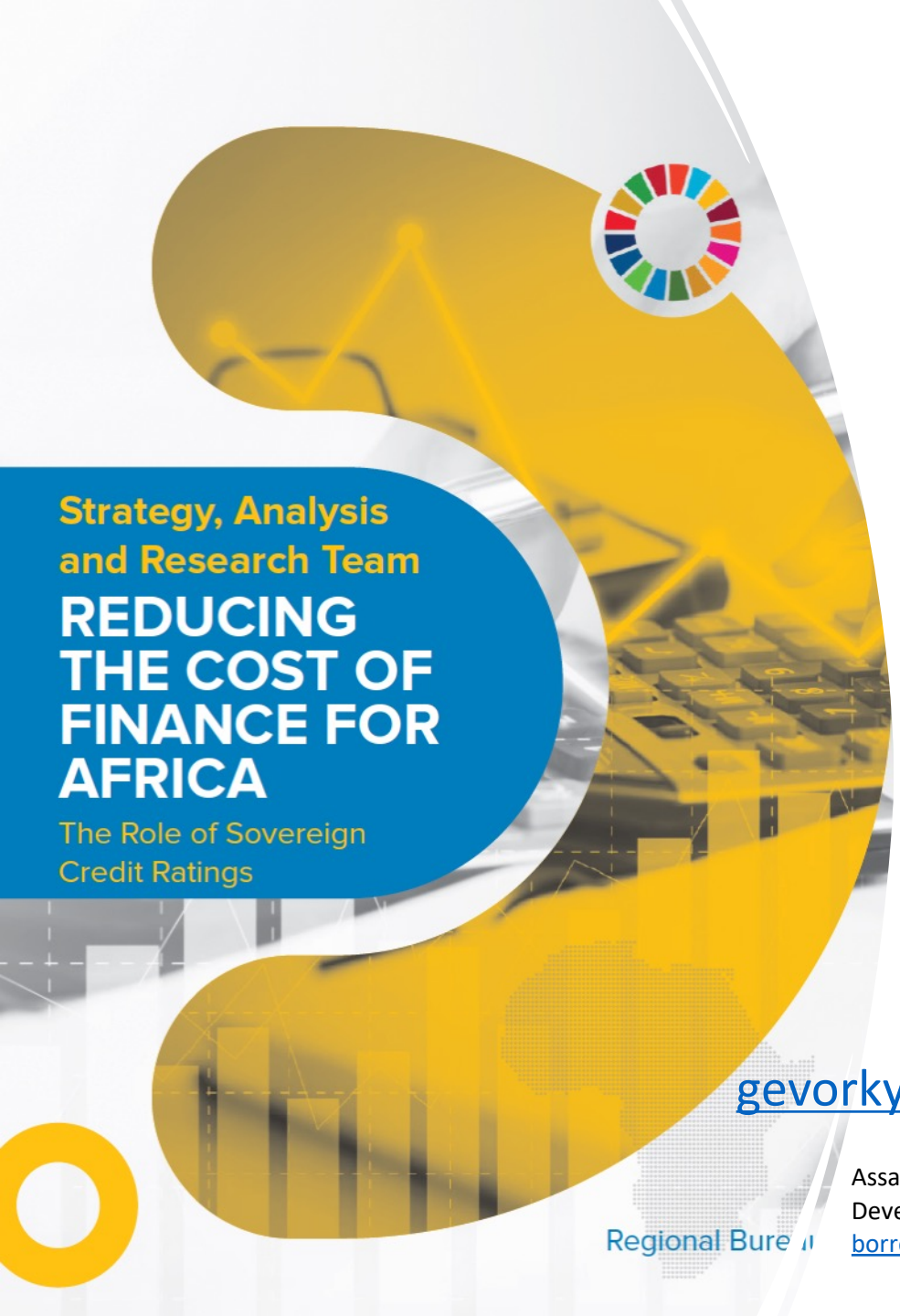

Sovereign credit ratings in Africa and sustainable development

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Assa, J. and A.V. Gevorkyan. 2003. Reducing the Cost of Finance for Africa: the Role of Sovereign Credit Ratings. United Nations Development Programme – Regional Bureau for Africa. Available online: https://www.undp.org/africa/publications/lowering-cost-borrowing-africa-role-sovereign-credit-ratings

Disclaimer: speaking in personal capacity / no UNDP representation

Background

- Are sovereign credit ratings objective?
- Do credit ratings matter in economic development?
- A recent UNDP paper finds idiosyncrasies across African national borrowers
- What are the implication of mis-rating for SDGs?
- Is this just an Africa case or can the evidence and methodology be relevant for the larger group of emerging markets?

Five focus areas of this report:

1. link between credit ratings and the development process
2. the role of multinational organizations in assisting African countries with their credit ratings initiation and review processes
3. domestic Africa-based credit rating agencies in contrast to the oligopolistic structure of the Big Three
4. new patterns in credit rating idiosyncrasies, opportunity costs, and deadweight loss due to underrating of sovereign debt for thirteen African countries
5. policy recommendations for different stakeholders

Two broad tasks of this project

1. analysis of the role of sovereign debt credit ratings in the macroeconomic development process
2. an attempt to empirically assess such impact for a group of African nations

- Access to the international capital remains one of the most challenging aspects of modern development
- Foreign exchange constraint and dominant currency literature



Gevorkyan, A.V. (ed.). 2023. *Foreign Exchange Constraint and Developing Economies*. Northampton, MA: Edward Elgar Publishing. https://www.e-elgar.com/shop/usd/foreign-exchange-constraint-and-developing-economies-9781800880498.html

Step 1: sovereign credit ratings and the development process

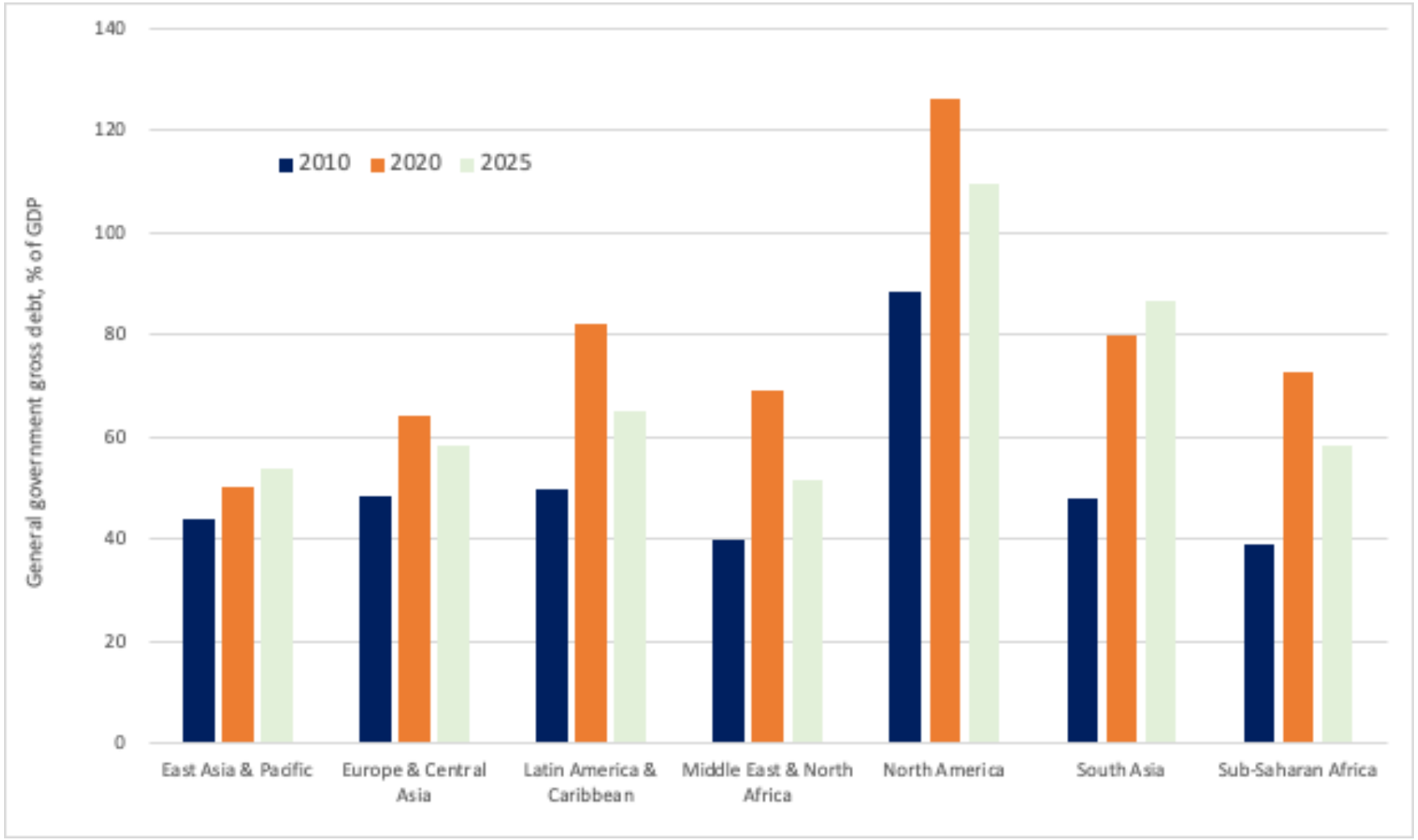
CRAs play an important role in the global capital markets

- The CRAs serve an important purpose of informing investors on risks and opportunities related to a sovereign borrower. The implied effort here is to bridge across informational asymmetries in the complexity of international markets, as borrowers are usually assumed to know about risks they are facing in servicing the debt to the lenders.

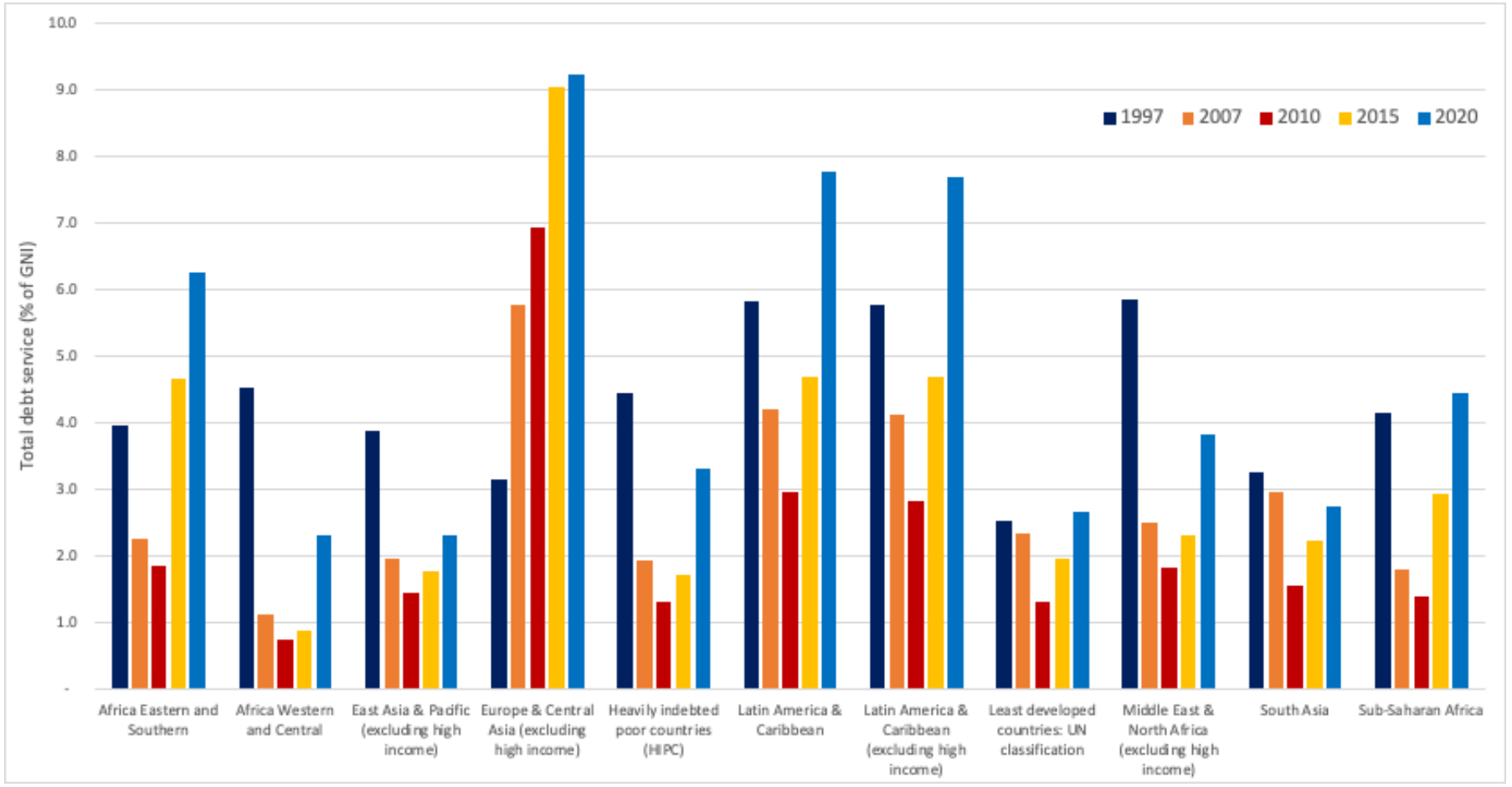
- Acquiring a credit rating becomes essential for a debt issuer (whether a corporate entity or government) to become a fully-fledged participant in global capital markets.

- In most cases, an investment grade credit rating is required for institutional portfolio managers, such as mutual and pension funds, teachers' unions, and others, to include a security in their holdings.

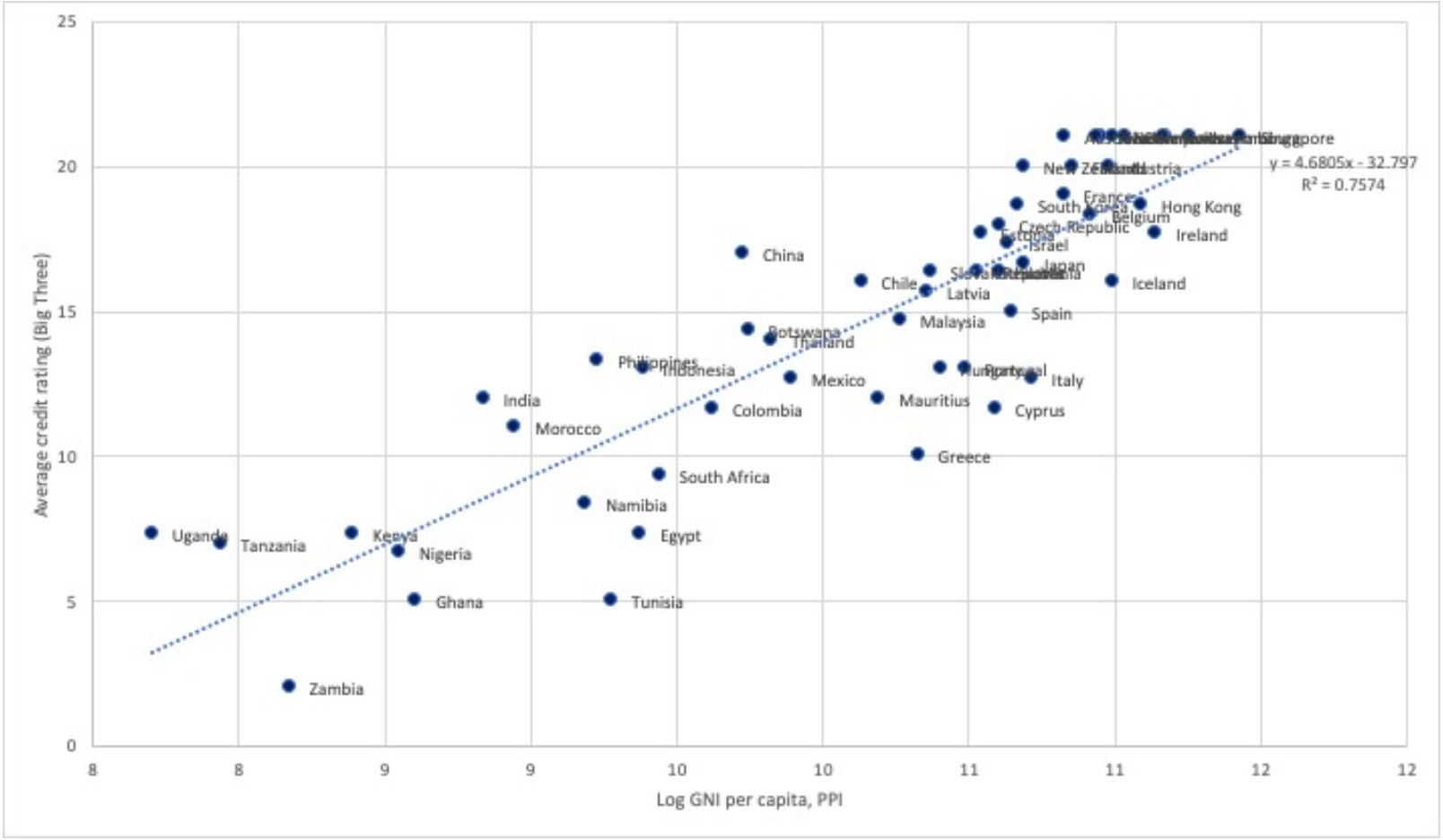
An overall rise in official state liabilities accumulation, with developing nations across regions seeing higher than proportionate increases



There has also been a clear rise in the debt service costs



Lower income countries receive lower debt ratings, but the idiosyncrasies are already visible among the countries of comparable income levels



Initial concerns with CRAs assignments

- potential bias in ratings,
- pro-cyclicality of ratings,
- governance issues and conflicts of interest, and
- lacking incorporation of climate risk & country specific factors.

Source: Griffith-Jones and Kraemer (2021)

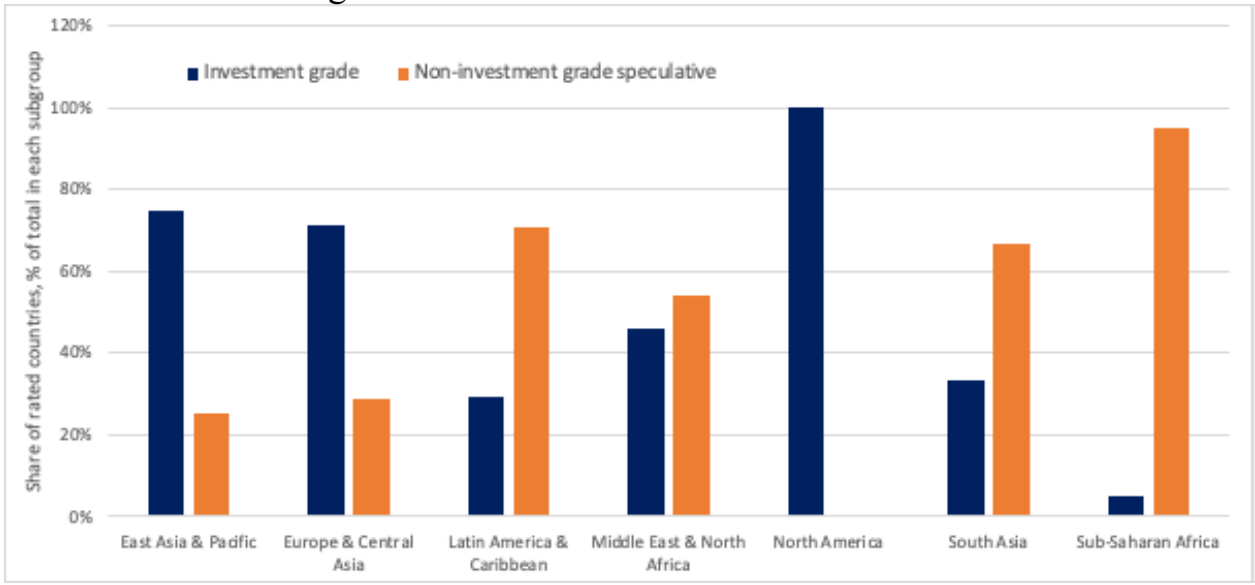
Step 2: the multinational organizations in assisting African countries with credit ratings

Critical role played by the multinational organizations

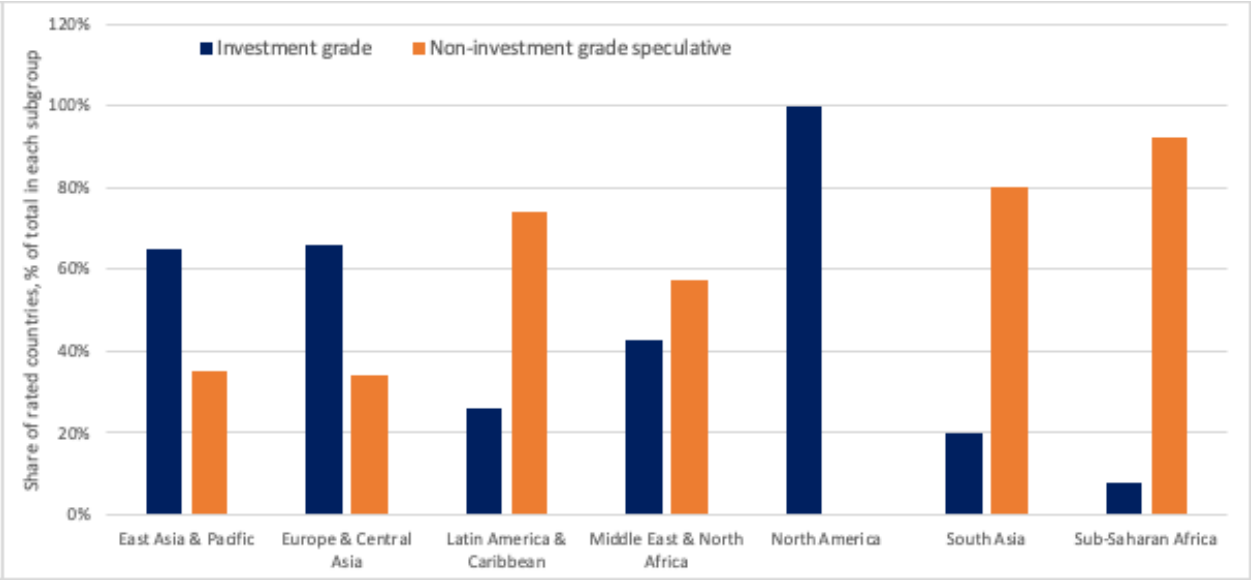
- in 2003 UNDP partnered with S&P by funding the agency's rating activity of African sovereign borrowers and providing technical country support
- By 2004, 13 African nations received their credit rating from S&P. That stood in contrast to only one sovereign rating in 1994, South Africa, which was the first African sovereign with an assigned rating.
- Consequently, African countries started to receive their credit ratings under the African Sovereign Credit Rating Initiative in the framework of the UNDP and S&P partnership.

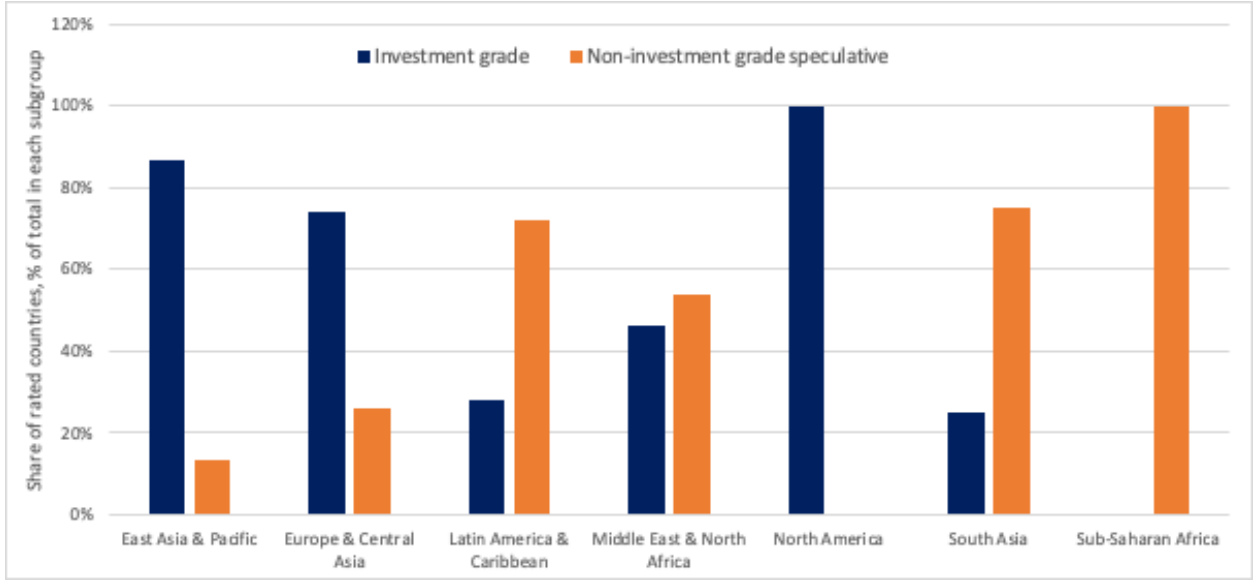
Irrespective of the CRA, the continent still lags in the number of investment grade ratings

Proportions of S&P's investment and non-investment grade ratings by region. % of total rated in each region



Proportions of Moody's investment and non-investment grade ratings by region, % of total rated in each region





Proportions of Fitch's investment and non-investment grade ratings by region, % of total rated in each region

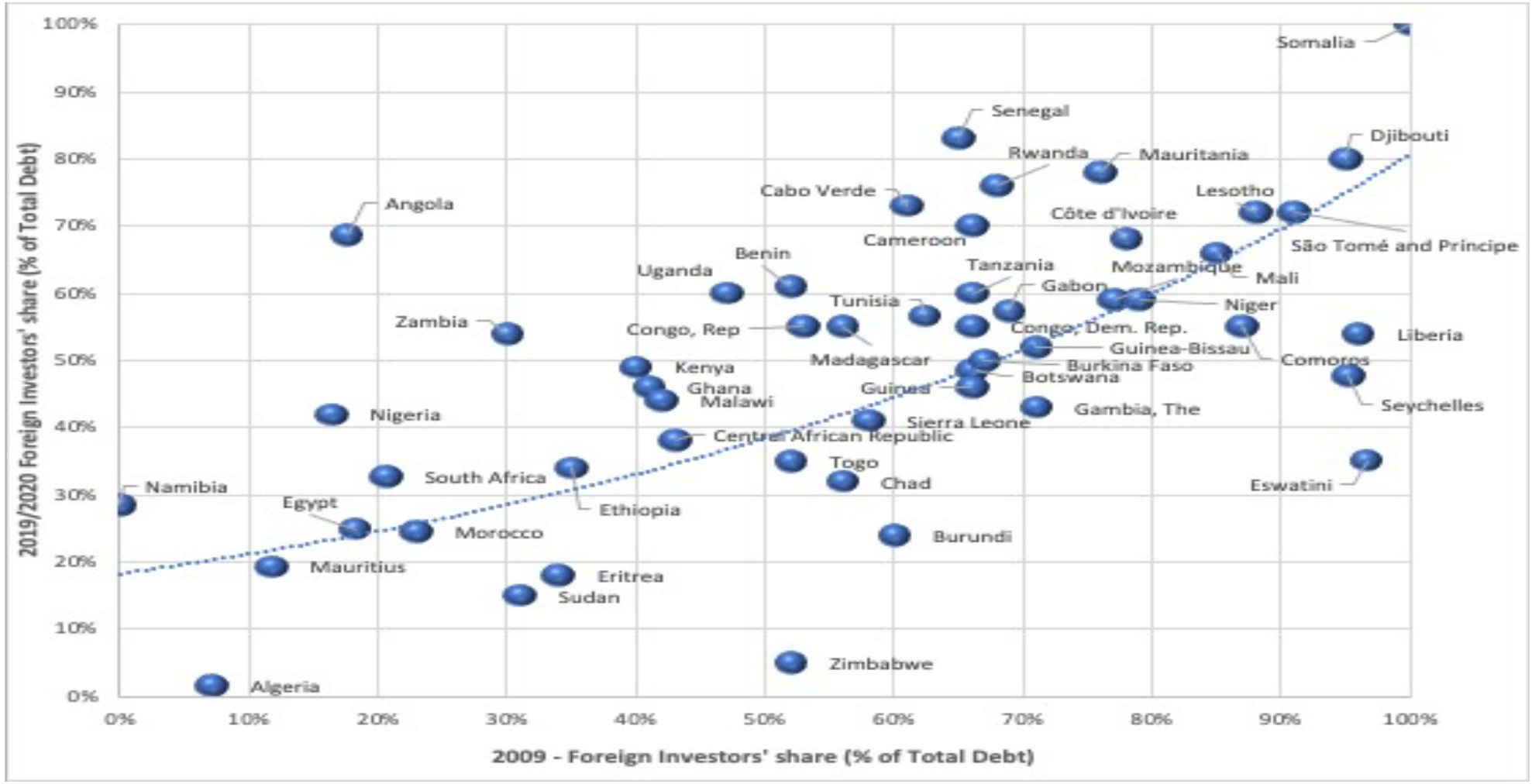
From the Human Right Council of the UN General Assembly:

- The report finds inherent structural issues with CRA and emphasizes the CRA's "failure to perform well their role of assessing risk and addressing the information asymmetry" between lenders and borrowers.
- The report identifies five structural flaws in the current Big Three CRA framework: 1) an oligopolistic model led by private companies with a quasi-governmental role in international capital markets; 2) conflict of interest and conflicting roles; 3) procyclicality of ratings and missing social indicators; 4) premise of an ideological bias in ratings; 5) and lack of accountability (technically, the published ratings and outlooks are CRA's opinions, which market participants are free to accept or ignore).
- The report calls for a reform of the current system with attention to the problems in human rights domain (we return to some of these points in the policy recommendations section below).

Source: Li (2021)

Step 3: African sovereign borrowers and the international credit ratings

foreign investors seem to have a geographic market preference, keeping their funds in the country they are already familiar with due to procyclical and “address” biases in the Big Three rating activities



Could Africa-based CRAs offer a more objective valuation of sovereign credit risk?

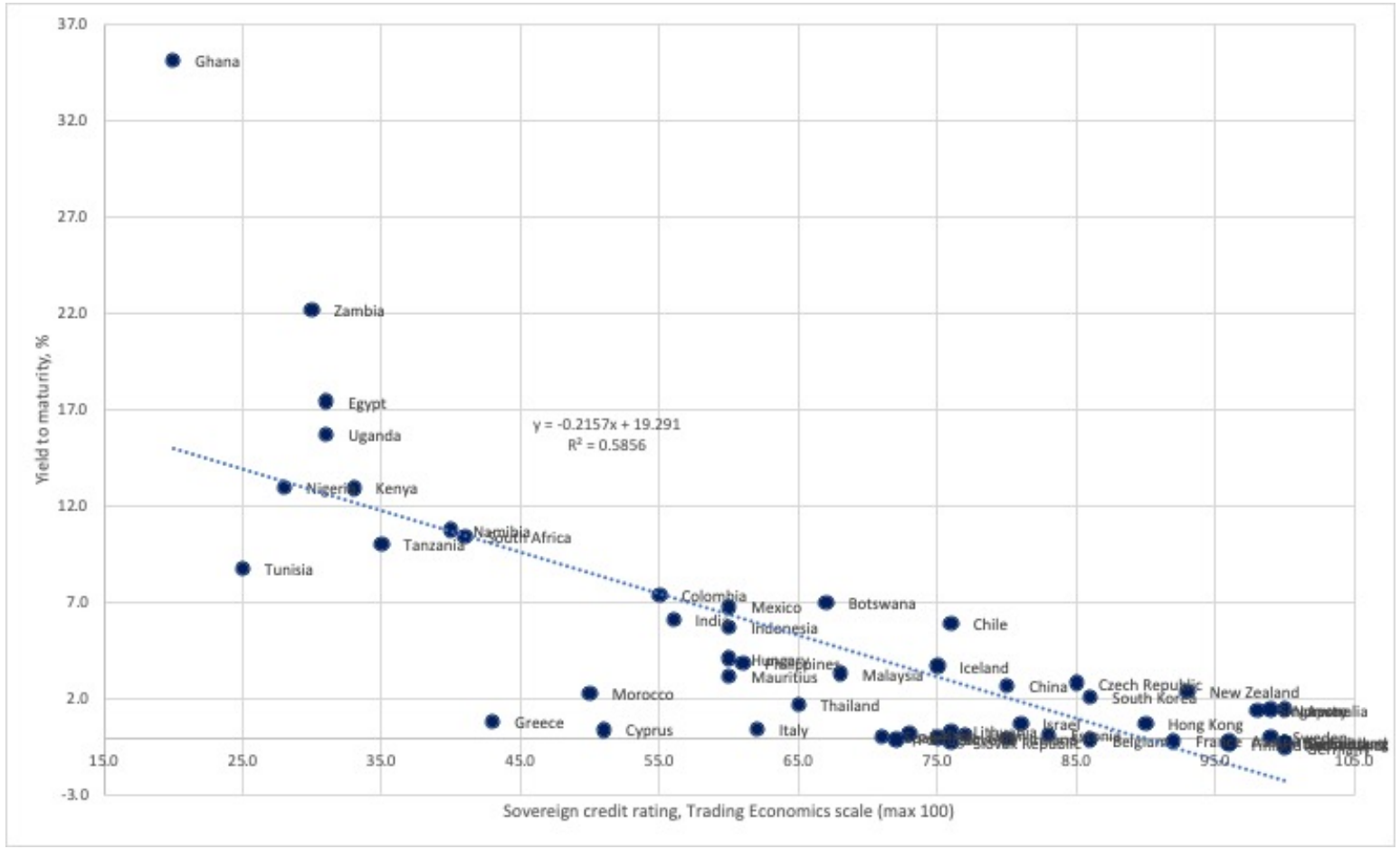
- Possibly, but there's a need for a clear and effective regulatory structure in the Africa-based CRAs sector
- inherent perception of risk for Africa's debt by the Big Three CRAs
- inability of borrowing entities to generate sufficient revenues in foreign currencies, which is needed for debt repayment
- African Union calls for a pan-African credit rating agency
- local pan-African agency that would strengthen local CRAs' capacity and rating operations in local currencies

Select Africa-based Credit Rating Agencies (CRA)

Credit Rating Agency	Year established	HQ location	Structure	Geographic coverage	Markets covered	Website
Operational						
Agusto & Co.	1992	Kenya, Nigeria, Rwanda	Domestic (Africa) CRA	Africa (primary focus, Nigeria)	Banks; Corporate Bonds; Funds & Investment Managers; Corporates; Finance & Leasing; Insurance Companies; Microfinance Banks; Mortgage Institutions; Municipal Bonds; Securities & Investment Firms; Trustee Firms; Sovereigns & Supranationals	www.agusto.com
Beacon Ratings		Ghana	Domestic (Africa) CRA	pan-African	SMEs rating; Insurance Companies rating; Bank Loan rating; Fund Manager Quality rating; Corporate Entities rating; Financial Institutions rating; Commercial Paper rating; Microfinance Institutions rating	https://www.beaconratings.com/
Bloomfield Investment	2007	Cote D'Ivoire	Domestic (Africa) CRA	pan-African	Commercial and industrial companies; financial institutions, financial instruments, public companies and local and sovereign authorities	https://bloomfield-investment.com
GCR Ratings	1996	Mauritius [offices across Africa]	As of May 2022, Moody's holds 51% stake. Originally established as the African arm of the New York Stock Exchange-listed Duff & Phelps	pan-African	Wide range corporate sector across various industries.	https://gcrratings.com/
Middle East Rating & Investors Service		Egypt	A joint venture between Moody's Investors Service, Finance & Banking Consultants International, and Egyptian Joint Stock Company	Egypt	Financial institutions; corporate; structured finance.	https://merisratings.com/
Annouced to be established in 2022						
Sovereign Africa Ratings	Announced 2022	South Africa	Domestic (Africa) CRA	pan-African	Sovereign ratings only	https://www.fsca.co.za/News%20Documents/FSCA%20Press%20Release%20-%20FSCA%20grants%20Sovereign%20Africa%20Ratings%20(Pty)%20Ltd%20credit%20rating%20agency%20licence%2022%20March%202022.pdf
African Credit Rating Agency	Announced 2022	N/A	Domestic (Africa) CRA	pan-African	Wide range corporate sector across various industries.	https://concertopr.com/en/the-african-credit-rating-agency-acra-an-alternative-to-the-big-three/

Step 4: estimating the credit rating idiosyncrasies

The inverse relationship between the credit rating and the yield



maximum and minimum boundary ranges of credit ratings

ρ_{ij}: a credit rating for country i by CRA j

TE_i: Trading Economics's algorithm's score for country i

$max(\rho_j)$: upper limit of score equivalent range for a credit rating by CRA j

$min(\rho_j)$: lower limit of score equivalent range for a credit rating by CRA j

For example, an S&P rating of AAA is equivalent to a TE score between 96 and 100. So $max(\rho_{S\&P})$=100 and $min(\rho_{S\&P})$=96. The idiosyncrasy ι of a credit rating for country i by agency j is then calculated as:

Underrating: if $max_{(\rho ij)} < TE_i$:

$$\iota_{ij} = max(\rho_{ij}) - TE_i \quad (1)$$

Overrating: if $min(\rho_{ij}) > TE_i$:

$$\iota_{ij} = min(\rho_{ij}) - TE_i \quad (2)$$

Within range: if $TE_{ij} \in [max(\rho_{ij}) - min(\rho_{ij})]$:

$$\iota_{ij} = 0 \quad (3)$$

Two principal variables: the average yield on sovereign bond (i) and the market value of debt outstanding (v).

$$i = \alpha + \beta_1 y_\gamma + \beta_2 \rho_\gamma + \varepsilon_\gamma$$

$$v = \alpha + \mu_1 s_\gamma + \mu_2 \rho_\gamma + \varepsilon_\gamma$$

For the y to ρ relationship we also account for the GNI per capita (PPP) in log form (g). For the v to ρ relationship we include a measure of the country's economy (s), measured as log of share of the country's GDP in PPP (all data are from WDI, 2022).

Table 3: Comparison of select African countries to "peers" in rating scores as reported by Moody's, S&P, and Trading Economics

a) Select countries rated BBB+ by S&P

Country	Income group	Yield To Maturity, %	S&P rating	TE score	Market value of debt outstanding as % of GDP	GNI per capita, $
Botswana	Upper middle income	7.0	BBB+	67	9.72	17,100
Philippines	Lower middle income	3.9	BBB+	61	30.77	10,220
Thailand	Upper middle income	1.7	BBB+	65	37.63	18,510

Assa, J. and A.V. Gevorkyan. 2003. Reducing the Cost of Finance for Africa: the Role of Sovereign Credit Ratings. United Nations Development Programme – Regional Bureau for Africa. Available online: https://www.undp.org/africa/publications/lowering-cost-borrowing-africa-role-sovereign-credit-ratings

Table 4: Sovereign Bonds in Domestic Currencies: Observed and Estimated Yield, Volume and Opportunity Costs for 13 African Economies

Country	Observed Yield to Maturity	Par Weighted Coupon, %	Market Value Outstanding (millions of $US)	Weighted Average Maturity, years	Adjusted Yield To Maturity	Interest savings (millions of $US)	Opportunity Cost (millions of $US)
Botswana	6.99	6.20	1,549	7.57	6.22	72	103
Egypt	17.41	13.63	139,597	2.52	16.41	2,757	9,264
Ghana	35.11	19.27	11,393	2.97	33.53	333	756
Kenya	12.93	12.26	32,827	9.83	12.31	1,128	2,178
Mauritius	3.17	3.75	7,163	5.36	2.83	117	475
Morocco	2.31	3.40	68,753	6.73	2.16	641	4,562
Namibia	10.77	9.13	3,013	9.49	10.14	116	200
Nigeria	12.97	13.21	40,600	11.37	12.36	1,454	2,694
South Africa	10.46	8.56	139,704	12.62	9.77	7,096	9,271
Tanzania	10.05	12.77	6,737	11.26	9.61	191	447
Tunisia	8.76	6.85	4,987	4.29	8.32	79	331
Uganda	15.72	15.18	6,527	7.73	15.05	193	433
Zambia	22.17	11.55	2,834	4.15	21.34	66	188
					Total	14,243	30,903

Source: author's estimate

Assa, J. and A.V. Gevorkyan. 2003. Reducing the Cost of Finance for Africa: the Role of Sovereign Credit Ratings. United Nations Development Programme – Regional Bureau for Africa. Available online: https://www.undp.org/africa/publications/lowering-cost-borrowing-africa-role-sovereign-credit-ratingsc

A sub-story: Eurobonds

Since 2006, Eurobond issuance by African nations has grown, becoming an important source of development financing for some countries.

Africa's most recent Eurobond issuances as of 1H 2022

Country	Yld to Mty (Ask)	Issue Date	Amt Issued	Maturity	BBG Composite	Currency
Angola	10.60	4/14/22	1,750,000,000	4/14/32	B-	USD
Nigeria	12.65	3/24/22	1,250,000,000	3/24/29	B-	USD
South Africa	7.59	4/20/22	1,400,000,000	4/20/32	BB-	USD
South Africa	8.74	4/20/22	1,600,000,000	4/20/52	BB-	USD

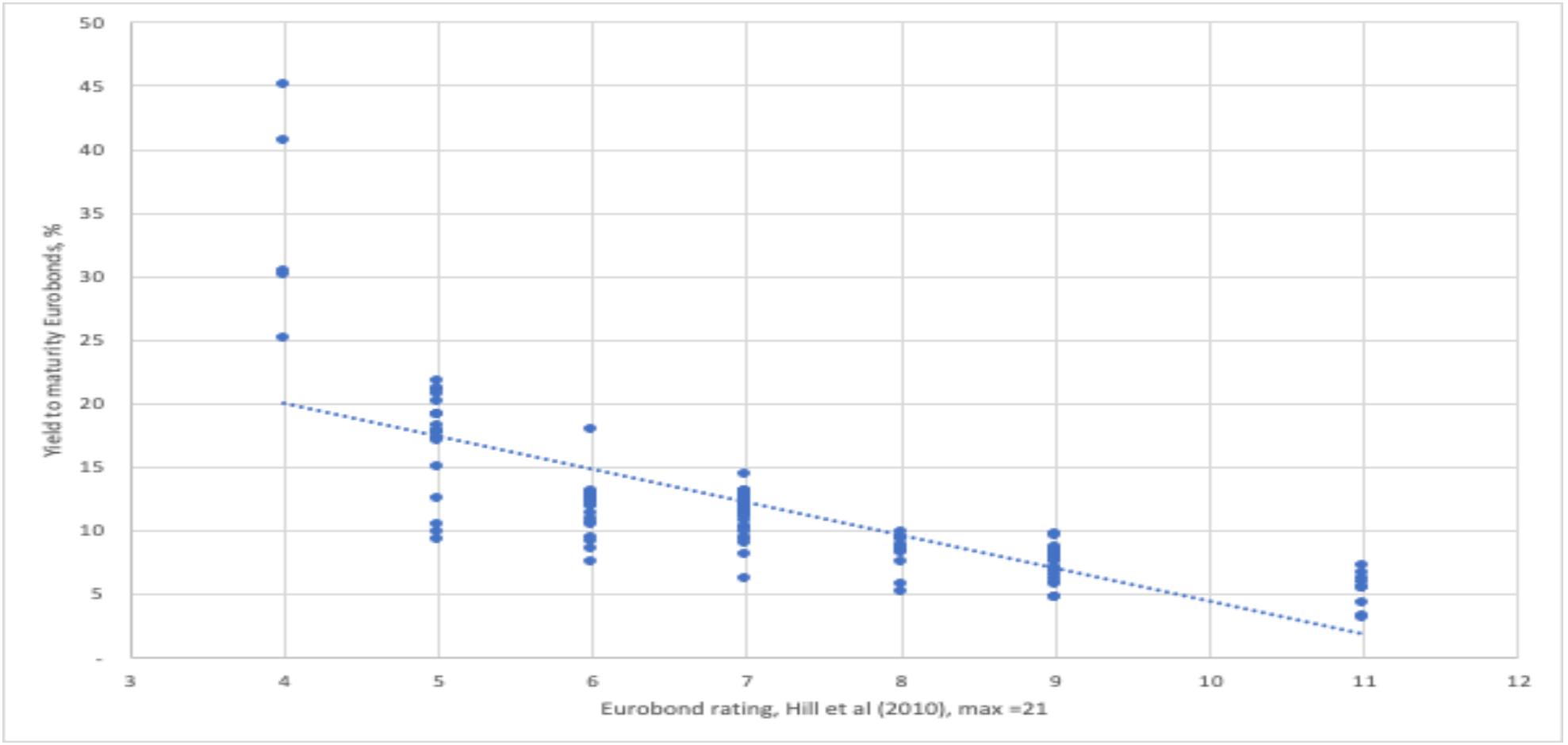
- A risk due to exchange rate fluctuations and currency mismatches
- An obligation (aside from not defaulting) of repaying the debt in an international reserve, currency, which in addition to a currency mismatch brings dependence on the dominant currency.
- Eurobonds come without preconditions, unlike multilateral concessionary financing
- We construct a novel dataset based on data from the Bloomberg Terminal for most Eurobonds issued by the African states

Gevorkyan, A.V. (ed.). 2023. *Foreign Exchange Constraint and Developing Economies*. Northampton, MA: Edward Elgar Publishing. https://www.e-elgar.com/shop/usd/foreign-exchange-constraint-and-developing-economies-9781800880498.html

Gevorkyan, A. V. and Kvangraven, I. H. 2016. Assessing Recent Determinants of Borrowing Costs in Sub-Saharan Africa. *Review of Development Economics*. Vol. 20(4): 721-738.

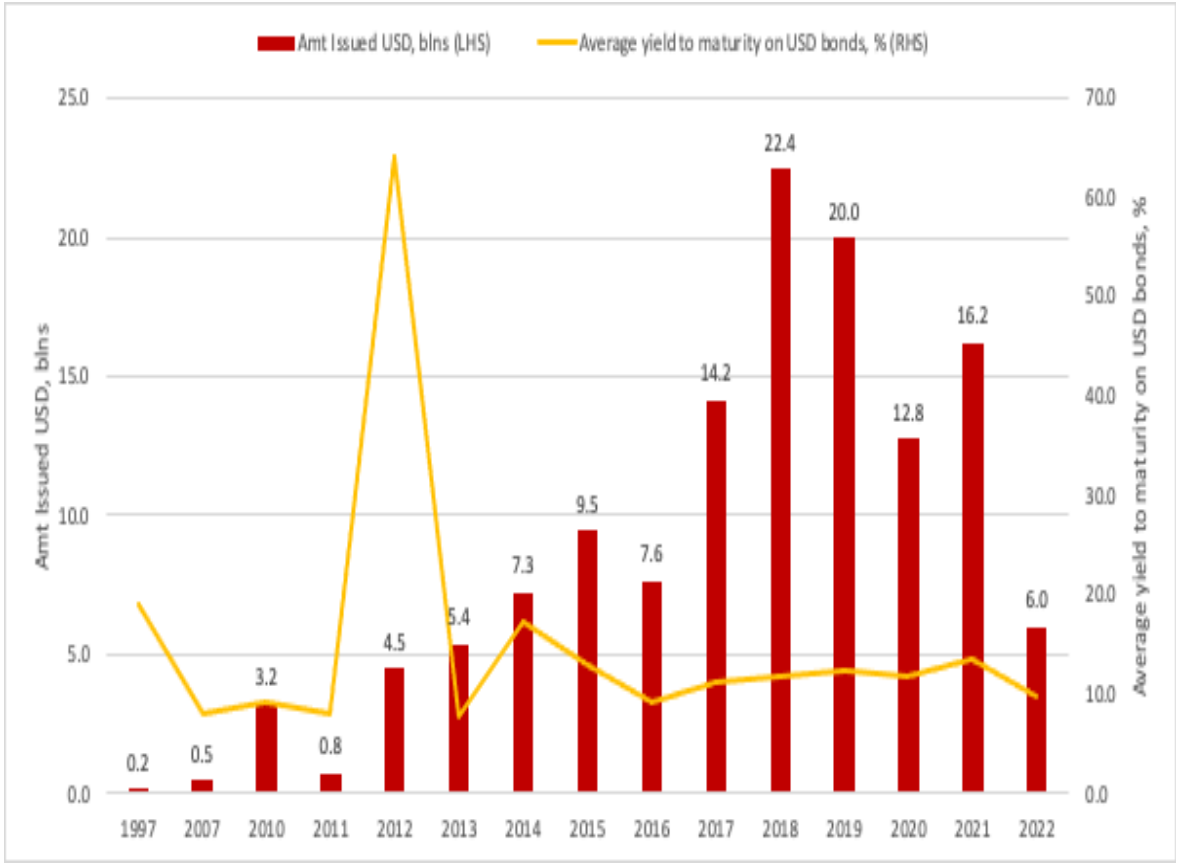
Eurobond rating and yield to maturity, Africa:

lower credit ratings correspond to higher borrowing costs

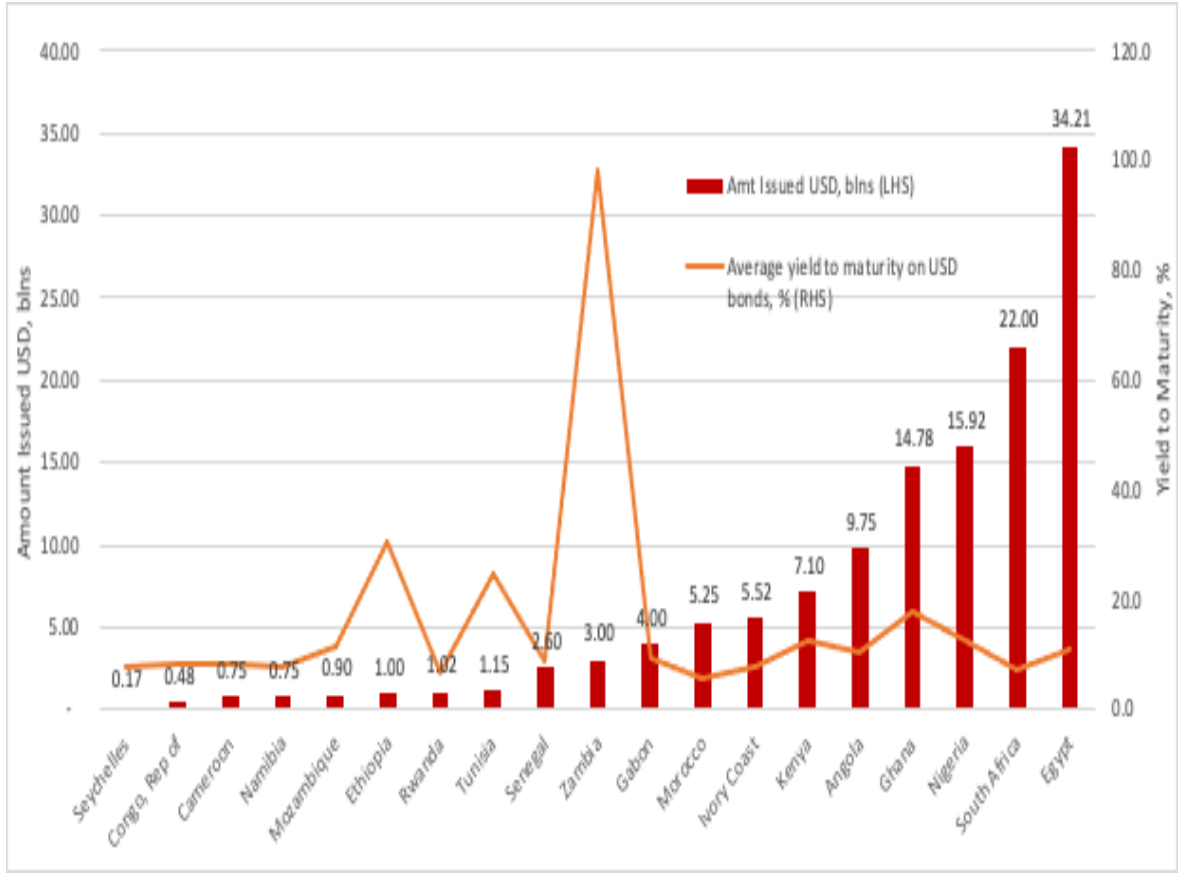


Majority of Africa's Eurobonds are USD-denominated

Amount issued and average yield to maturity of USD denominated Eurobonds by African nations, by year of issuance (for bonds currently outstanding)

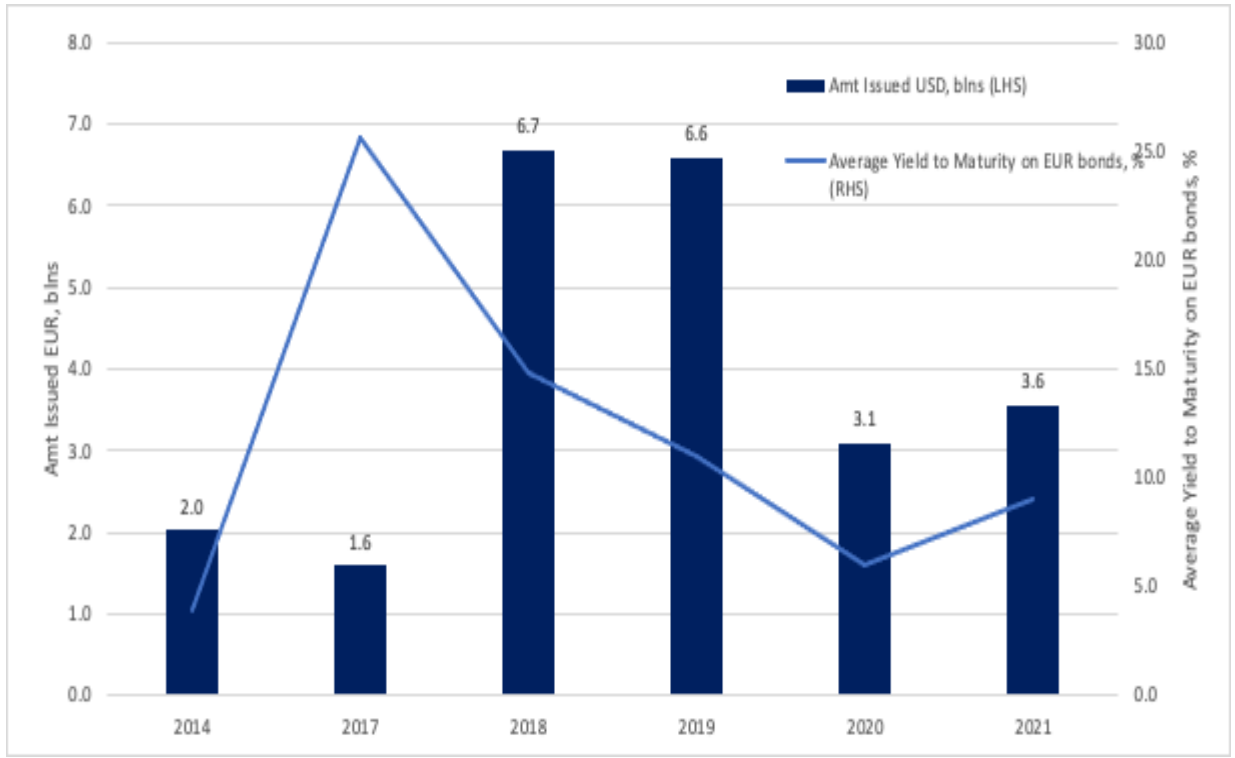


Amount issued and average yield to maturity of USD denominated Eurobonds by African nations, by country (for bonds currently outstanding)

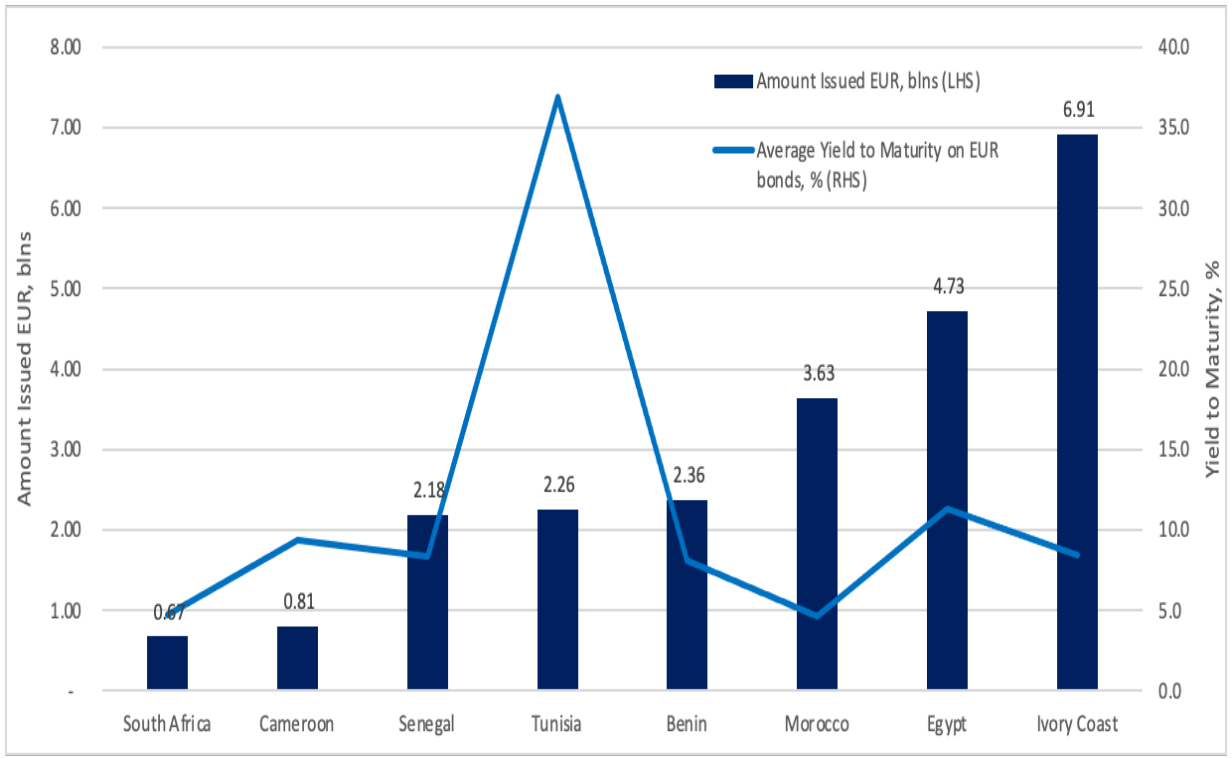


EUR issuance is small and is country specific

Amount issued and average yield to maturity of EUR denominated Eurobonds by African nations, by year of issuance (for bonds currently outstanding)



Amount issued and average yield to maturity of EUR denominated Eurobonds by African nations, by country (for bonds currently outstanding)



compared to the EUR-denominated bonds, the USD-denominated bonds carried higher yields and coupon payments across all maturity groups

Average yield, coupon, and total amount issued for the **EUR** denominated bonds in Africa by maturity

Maturity	Average Yield to Maturity	Average Coupon Rate	Total Amount Issued, EUR bln
under 5 years	40.7	6.8	0.57
6 - 10 years	12.4	4.4	8.81
11 - 20 years	8.6	4.9	11.53
21 - 30 years	9.6	6.8	2.30
31 + years	9.5	6.9	0.36
EUR Totals	**11.5**	**5.0**	**23.56**

Average yield, coupon, and total amount issued for the **USD** denominated bonds in Africa by maturity

Maturity	Average Yield to Maturity	Average Coupon Rate	Total Amount Issued, USD bln
under 5 years	11.8	4.6	6.08
6 - 10 years	17.5	6.7	49.24
11 - 20 years	11.8	7.0	37.92
21 - 30 years	10.8	7.2	31.60
31 + years	14.8	8.5	5.50
USD Totals	**13.9**	**6.8**	**130.34**

Latest work on Africa's Eurobonds assessments?

- African countries are paying a premium in borrowing costs of 2.9 percentage points in excess of what the macroeconomic fundamentals and current credit ratings might suggest
- higher coupon payments can only be explained by a penalty on the borrowing nations resulting from investor's biased perception (consistent with studies mentioned in the earlier sections of this report)
- The estimated net present value of such bias is at USD2.2 billion in additional coupon payments

Olabisi and Stein (2015)

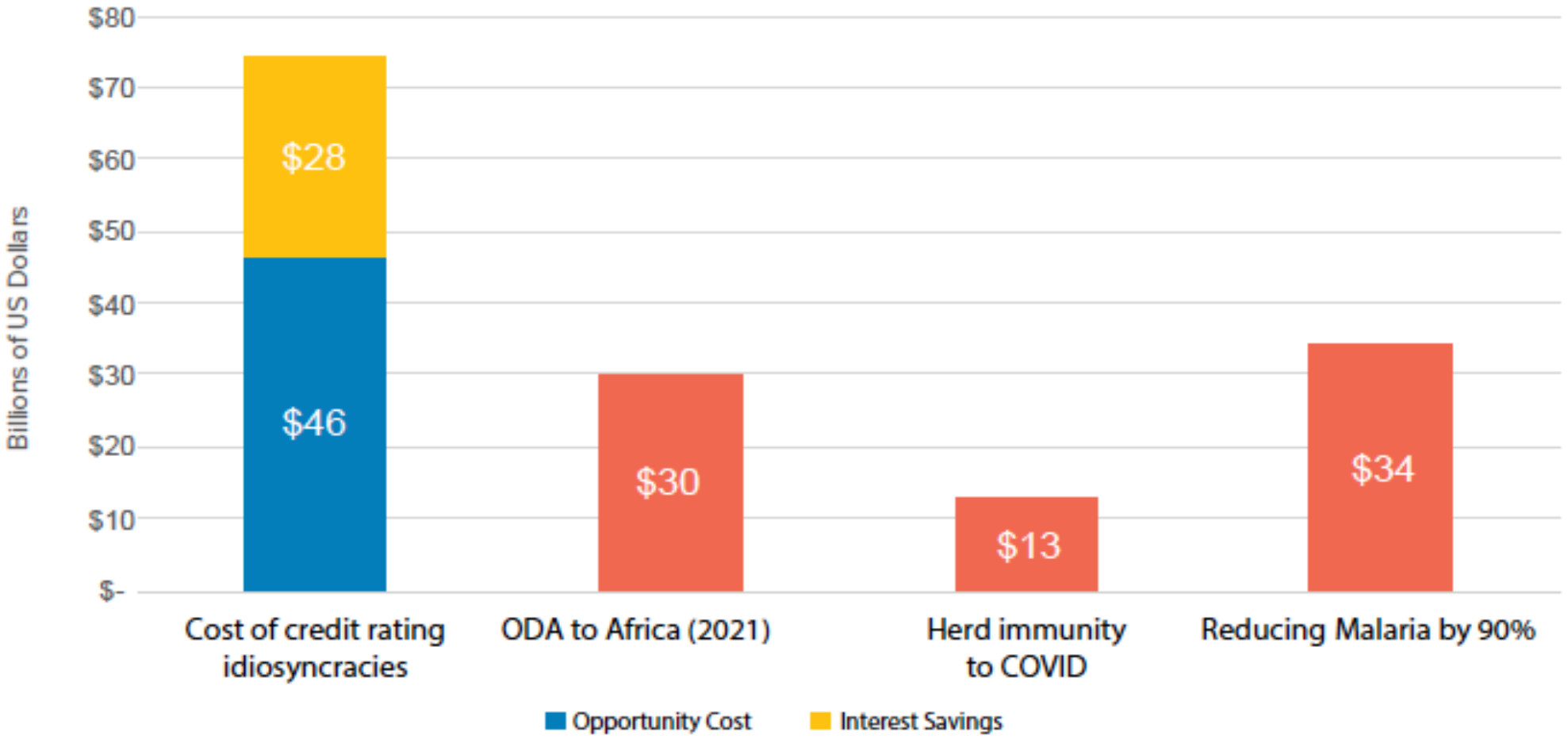
Table 9: Eurobonds: Observed and Estimated Yield, Volume and Opportunity Costs for 16 African Economies

Country	Observed Yield to Maturity	Par Weighted Coupon, %	Market Value Outstanding (millions of $US)	Weighted Average Maturity, years	Adjusted Yield To Maturity	Interest savings (millions of $US)	Opportunity Cost (millions of $US)
Angola	9.95	8.75	9,114	16.58	9.26	538	710
Benin	8.56	5.35	2,290	15.12	7.92	141	178
Cameroon	10.56	6.50	995	10.84	9.86	50	77
Cote d'Ivoire	8.16	5.84	10,089	16.67	7.47	706	786
Egypt, Arab Rep.	11.81	6.04	54,568	13.61	10.88	4,017	4,250
Ethiopia	35.58	6.63	1,000	10.00	33.56	75	78
Gabon	9.31	6.82	2,573	10.42	8.67	117	200
Ghana	33.47	7.85	14,149	15.73	31.57	929	1,102
Kenya	10.53	7.25	7,100	13.49	9.77	428	553
Morocco	5.37	3.19	9,040	14.77	4.79	608	704
Namibia	8.17	5.25	750	10.00	7.48	38	58
Nigeria	11.56	7.49	15,995	15.54	10.77	1,016	1,246
Rwanda	10.17	5.60	2,042	10.00	9.43	106	159
Senegal	8.70	5.74	13,600	17.17	8.04	897	1,059
South Africa	6.99	5.43	45,401	19.00	6.33	3,466	3,536
Tunisia	21.21	6.17	10,410	8.22	19.87	697	811
					Total	13,829	15,508

Source: author's estimate

Assa, J. and A.V. Gevorkyan. 2003. Reducing the Cost of Finance for Africa: the Role of Sovereign Credit Ratings. United Nations Development Programme – Regional Bureau for Africa. Available online: https://www.undp.org/africa/publications/lowering-cost-borrowing-africa-role-sovereign-credit-ratings

Figure 5: Development Costs of Credit Ratings Idiosyncracies



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Step 5: some policy suggestions

Could a diaspora bond help?

- The key driving factor is the altruism of a diaspora investor, willing to invest into the development of their ancestral country while earning a lower than market return (known as a ‘patriotic discount’ and the state borrowing at significantly lower costs.
- Such bonds presuppose governments active and transparent reporting to the bondholders on the use of funds’, which are intended for longer-term developmental projects.
- But…
- A combination of structural, accountability, and diaspora-engagement factors that has contributed to the success elsewhere and has been hard to replicate since the early programs

Gevorkyan, A.V. 2021. **Diaspora bonds: can success be replicated?** SSRN Working Paper (Jan 5) http://ssrn.com/abstract=3760281 // podcast https://youtu.be/Yc6O0Nvy9xI

African sovereign borrowers are in a position to rebalance the entire global credit rating system leading to massive efficiency and value gains across the developing world. Some possible policy actions:

- Establishing a multilateral credit rating agency
- Implementing a regional pan-African rating agency
- Strengthening the capacity of and promoting a more efficient marketplace among already existing Africa-based CRAs
- Instituting a greater transparency of the Big Three methodology
- Adoption and standardization (for financial markets participants) of alternative ratings
- Renewed focus on ESG and SDG priorities in each economy.

In the end – part I

- Whether a multilateral credit rating agency may be a viable substitute to the dominant power of the Big Three CRAs in the oligopolistic environment where Africa's domestic CRAs are outmatched remains to be discussed
- This report adds to the recent calls for a need for an urgent assessment ushering greater transparency into the current process and consideration of more country-context treatment methodology.
- Attention to the differences in long-term development finance in a country lacking financial depth compared to the more advanced economies with robust capital markets

In the end – part II

- If the lessons of economic history of developed economies and the teaching of some of the fundamental economists are of any relevance, the cornerstone of any such critical review effort of the present sovereign credit ratings should be a country's medium to long term economic development strategy as opposed to short-term fiscal prudence.
- Stated differently, despite proliferation of financial modes of global interconnection, the conventional economic development priorities remain relevant and essential in Africa and small emerging markets across the world.