



***ALLOCATING ADF FUNDS
ACCORDING TO PERFORMANCE AND FRAGILITY
IN AN INTEGRATED FRAMEWORK***

**Abidjan, Côte d'Ivoire
March 8th 2018**

**A STUDY BY FERDI
AT THE REQUEST OF THE AFRICAN DEVELOPMENT BANK**



Introduction

- This study was conducted in two phases at the request of the AfDB. It proposes a conceptual framework to allocate ADF resources, taking into account the vulnerability of African countries.
- The need to assess the rationale of the rules governing the allocation of ADF resources results from the challenge faced by African countries due to the severity of situations of economic, climatic, and socio-political fragility.
- *Fully addressing the fragility challenge in the ADF allocation process is key to evidence ADB comparative advantage in the fight against fragility*
- This presentation consists of four parts: (i) Why change? (ii) What conceptual framework should be sought? (iii) What indicators should be used? And (iv) What are the findings of simulations?



I - Why change?

The performance/fragility dilemma

- Donors agree that multilateral development banks should allocate their concessional funds according to the country performances
- At the same time they more and more express a concern about the state fragility of many countries, in particular in Africa, and recognize the need of a special support to these countries.
- The issue is that fragile states are by definition poor performers whereas good performance strongly drives aid allocation.
- Attempt to address this issue by using a category of fragile states (now « transition states » at the ADB), with a special envelope devoted to them, the Transition Support Facility (TSF).



I - Why change?

Drawbacks of using a category of fragile countries

- Difficulty to translate a loose concept of fragility in a clear category.
- Well illustrated by the last design of the ADF “transition economies”:
 - from the “harmonized list” of FS, relying mainly on a low level of CPIA (the opposite of what is considered as performance)
 - and/or several other criteria, either quantitative or qualitative (commitment to consolidate peace and security, contraction of GNI per capita, low level of human capital, improvement of macro policy).
- ADF category only captures some of the *various aspects of fragility*.
- It ignores the *degrees of fragility* between countries both within and out of the category.
- It reflects a *curative and not a preventive* approach of fragility.
- It corresponds to a view of fragility as a transitory feature.



I - Why change?

Three principles: Transparency , Equity, Effectiveness

- The use of continuous indicators of structural fragility would lead to a *more transparent* system as well as a clearer impact of performance.
 - In addition, it would lead to *more equitable* allocation, differentiating between countries according to their degree of fragility and contributing to creating greater equality of opportunities among them.
 - Finally, it would lead to *more effective* allocation, for two reasons: (i) the marginal effectiveness of aid is stronger in the most vulnerable countries; (ii) a better performance incentive when structural handicaps are taken into account.
- The implementation of these principles *implies distinguishing between two sources of fragility*, the one resulting from exogenous factors, and the one reflecting the country's present policies. The fundamental issue is therefore to *simultaneously address fragility as a need and fragility as a sign of poor performance*.



II – How to change?

Four options for a new conceptual framework

- *Phase I* of the Ferdi study considered three options:
 1. reforming the TSF by taking into account the vulnerability level of the various countries eligible for this facility in a specific formula;
 2. implementing the same reform with an extension of the TSF to all ADF-eligible countries;
 3. merging the TSF into a general allocation formula taking into account vulnerability in all ADF-eligible countries.
- *Phase II* highlighted the advantages and drawbacks of each of them.
- *The final report* proposed a *fourth and preferred option* that combines
 - a PBA revised to take into account structural vulnerabilities faced at various levels by most of ADF eligible countries
 - with a TSF updated to take into account as well various forms of vulnerabilities characterizing transition states.



II – How to change?

The new conceptual framework

- The proposed reform combines a general allocation based on both performance and vulnerability (*Performance and Vulnerability Based Allocation – PVBA*) along with a new specific allocation formula for the more fragile countries or countries in transition corresponding to the TSF.
- The simple structure proposed for the PBA, now called PVBA, follows the formula currently used for the PBA:

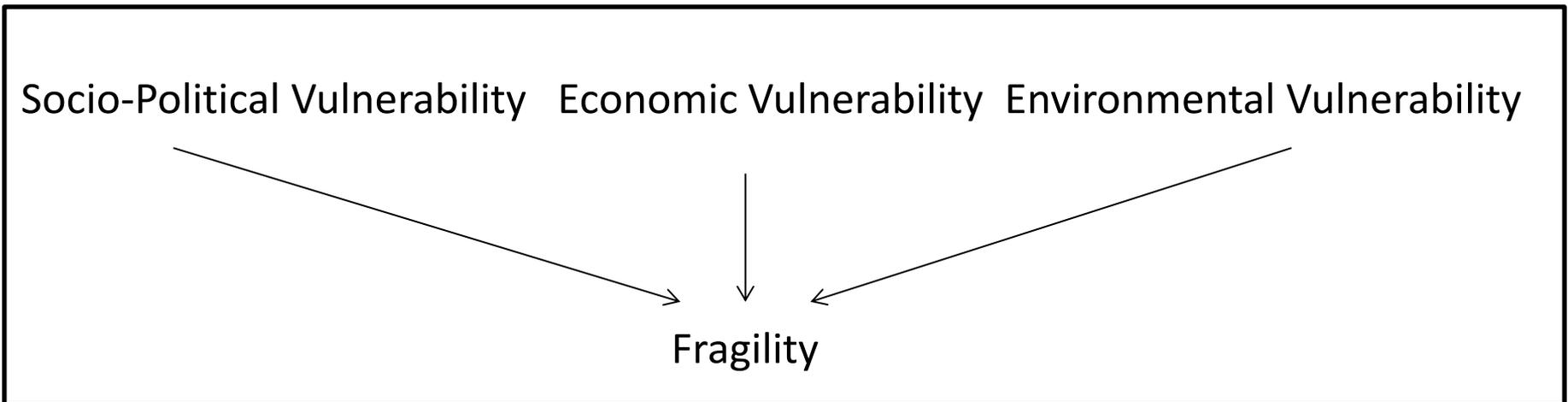
$$\text{Allocation} = f(\text{Population, Needs, Fragility, Performance})$$

- The main challenge of this PVBA is *to design fragility from the various kinds of structural vulnerability*. The method relies on the use and aggregation of several specific indicators of vulnerability, each with its own logic and explicit weight in the allocation formula.

II – How to change?

From structural vulnerabilities to fragility

- Our approach to structural fragility aims at taking into account its three main components, consistently with the ADB's definition of the drivers of fragility:



- *It allows needs, performance and structural fragility to coexist as positive allocation factors in a consistent framework.*



II – How to change? *Building on the current PBA framework*

- The PVBA introduces *three other changes* compared to the current PBA:
 - (i) it removes the indicator of poor *infrastructure*, which is now incorporated into the structural economic vulnerability index;
 - (ii) it introduces an indicator of *human needs* alongside the criterion of per capita GDP to reflect the needs of countries more specifically than the exclusive use of per capita GDP; and
 - (iii) it introduces in the definition of *performance* an element adapted to the *specific context of fragility*, proxied by the reduction in violence.
- Other minor technical improvements are proposed to make the allocation process more transparent.



II – How to change?

Reforming TSF Pilar I

- The current list of transition states is based more on a static, curative vision of fragility rather than on a preventive and dynamic one that would take vulnerability into account.
- The goal is to *strengthen the specific nature of the TSF* allocation with respect to the PVBA in order to increase its transparency as well as its responsiveness to new events without destroying the link between allocation and performance.
- Two kinds of reforms are therefore proposed:
 - (i) *TSF eligibility*: The list of TSF-eligible countries could be based on their fragility as measured by a synthetic indicator of structural fragility.
 - (ii) *TSF formula*: a formula of the PVBA type could be used for the allocation of Pillar I resources while giving greater weight to indicators of vulnerability and human needs.



III - What indicators should be used?

Key properties

- The indicator(s) of fragility should reflect three main kinds of vulnerability (*economic, socio-political, environmental*), logically combined due to their relationships, and supplemented by an indicator of human needs.
- They should also be designed *as exogenous as possible* (i.e. independent of present policy), since in the formulas these fragilities are positive factors of allocation.
- Vulnerability to shocks indicators should primarily reflect both the likely size of the shocks and the exposure to these shocks.

III - What indicators should be used?

Defining vulnerability

- Vulnerability, at the *macro* level (as at the *micro* level) is the risk to be hampered by exogenous shocks, either natural or external (...)
- It depends on three main components:
 - likely *size of the shocks*, recurrent or progressive (...)
 - the *exposure* to these shocks
 - the capacity to cope with them or capacity to adapt or *resilience*
- *Structural vulnerability* is the vulnerability that does not depend on the country present will, and is determined only by exogenous and lasting factors (of the three components)
- *General vulnerability* also depends on the country present and future will, that is more rapidly changing, in particular through the resilience component
- Distinctions valid for various kinds of shocks and vulnerability



III - What indicators should be used?

Vulnerability and Resilience

- General vulnerability also depends on the capacity to react, which mainly depends on policy, leading to keep vulnerability aside.
- But the capacity to react to some extent also depends on structural factors, the « structural resilience ».
- These structural factors of resilience are broad factors, captured in the formula by the levels of income pc (tells us how well the inhabitants of a country are able to face climatic and economic shocks on average) and human capital (influences the ability of countries to respond to shocks), as they are in LDC criteria).
- To be noted , GNIpc and the Human Assets Index (HAI) are included along with structural vulnerability indicators in this framework, taking into account the needs but also resilience.
- Including resilience directly in the vulnerability index would blur the specificity of the vulnerability concept.



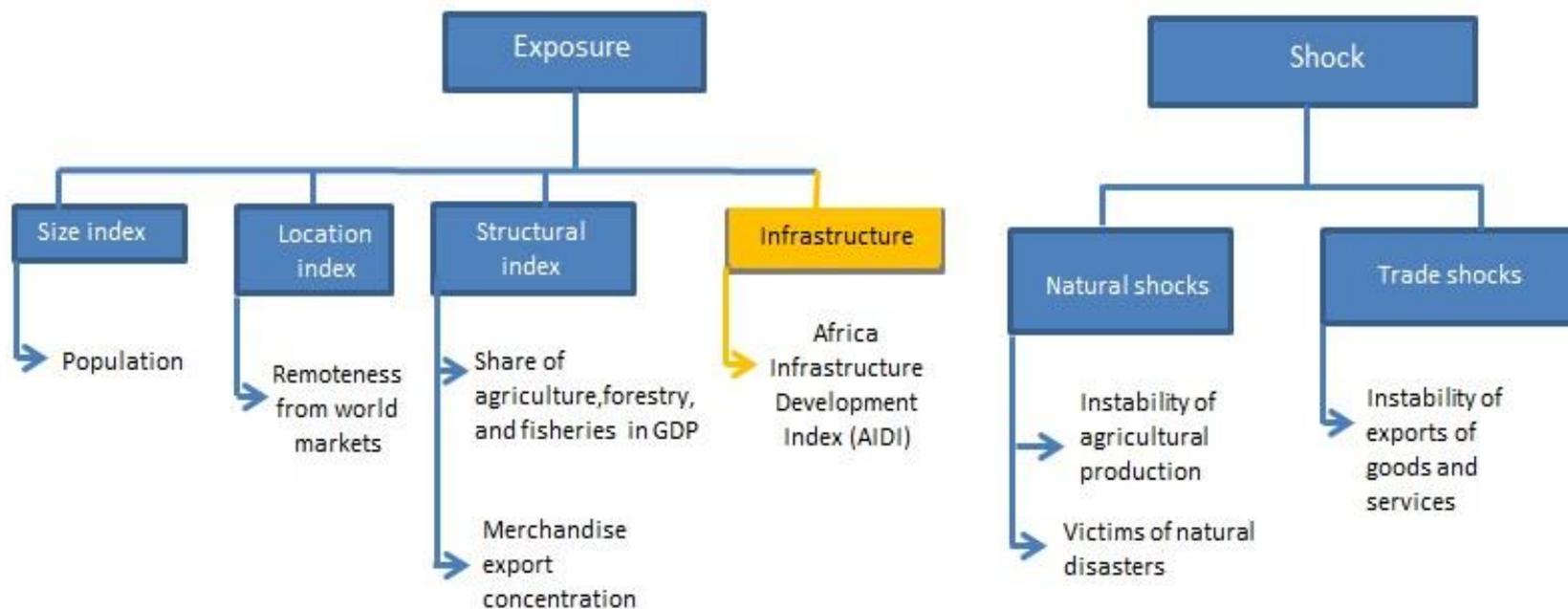
III - What indicators should be used?

Economic vulnerability

- *Structural economic vulnerability* could be captured by the Economic Vulnerability Index (EVI) used by the UN for the identification of LDCs and recommended for aid allocation by UN GA.
- Captures only structural components of vulnerability, chosen with regard to their expected (or evidenced) effect on economic growth
- Transparent and parsimonious, EVI relies on:
 - 4 main (structural) exposure components (ex ante vulnerability)
 - 3 (exogenous) shock components, measuring past recurrent shocks, likely to re-occur in the future and to already hamper future economic growth
- However, some modifications to the index are needed to make it consistent with the other indices notably the index of vulnerability to climate change but also to tailor it to the specific characteristics of Africa.
- Among other possibilities we use the 2006-2009 version of the UN EVI, but add an additional component to the exposure sub-index to account for the level of infrastructure.



Economic Vulnerability Index (EVI)





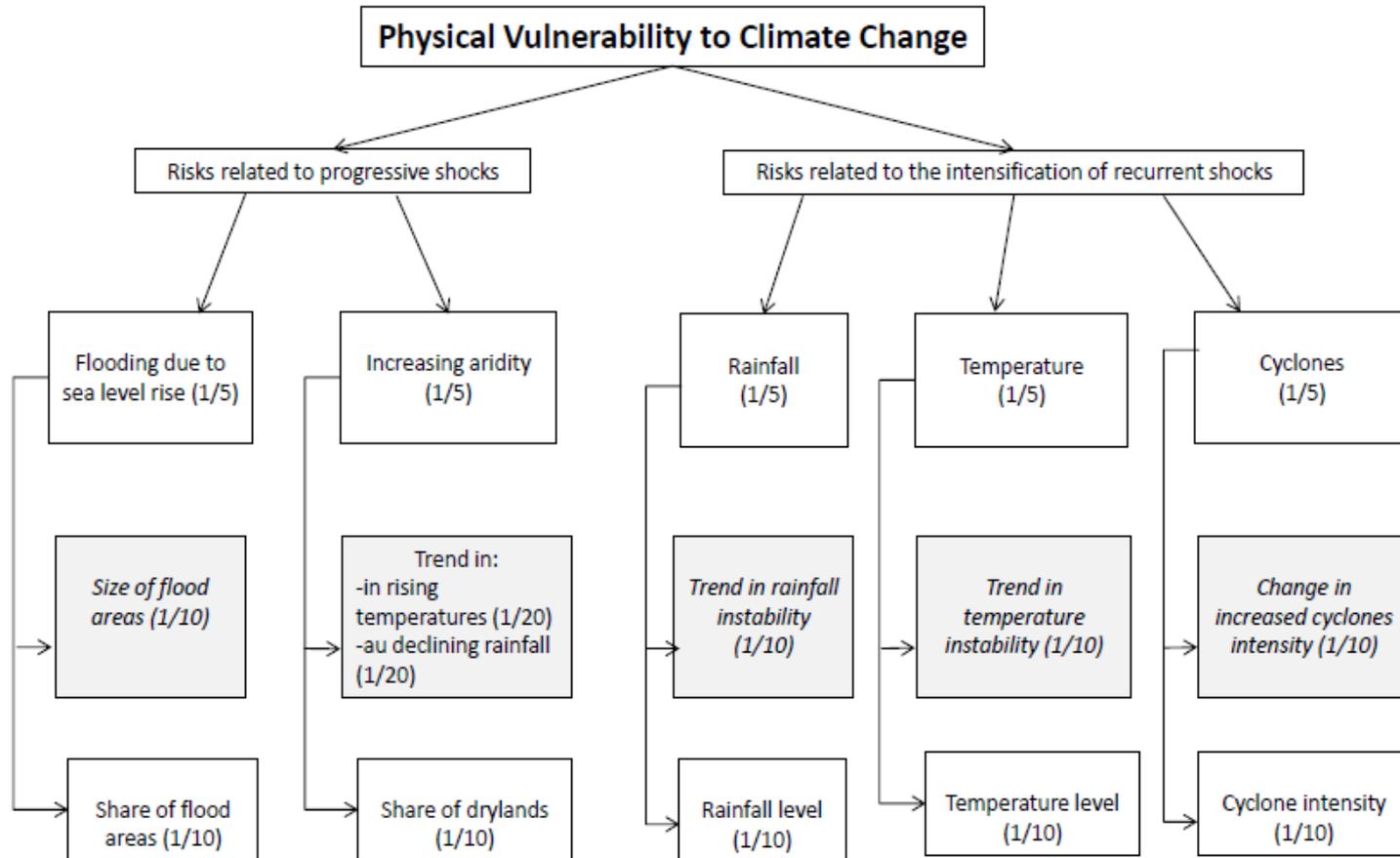
III - What indicators should be used?

Vulnerability to Climate Change

- Forward-looking and likely to capture long term risks
- Relies only on geo-physical components, without any debatable socio-economic component
- So does not include components reflecting the adaptive capacity
- Makes a distinction between two kinds of risks due to climate change
 - risks related to progressive shocks (such as over-aridity) and
 - risks related to the intensification of recurrent shocks (in rainfall or temperature)
- Makes another distinction between the shocks (trend) and the exposure to the shocks (past shocks) , and, because the impact of the shocks depends on the initial exposure, uses a geometric averaging.
- Takes into account asymmetric shocks.
- Adaptive capacity is kept aside.



Physical Vulnerability to Climate Change Index (PVCCI)





III - What indicators should be used?

Socio-political vulnerability

- *Usually proxied* by complex and competing indicators (eg Fragile states index, F.S.I.; Country indicators of foreign policy, C.I.F.P.; etc.) which most often mix many components a large part of which are not “structural” but linked to the present policies and/or involve a subjective assessment, ie mix structural needs and performance indicators
- For the socio-political vulnerability it is indeed difficult but needed to *disentangle structural (more exogenous) components from policy ones.*
- An alternative approach proposed is first to assess an “exogenous” political vulnerability from *internal violence events* which by their frequency and depth reveal political vulnerability. It is an outcome-based vulnerability index rather more than a structural index.
- A better possible indicator proposed is an Internal Violence Index (IVI), a well focused *index of results, supplemented by a risk indicator of future violence.*



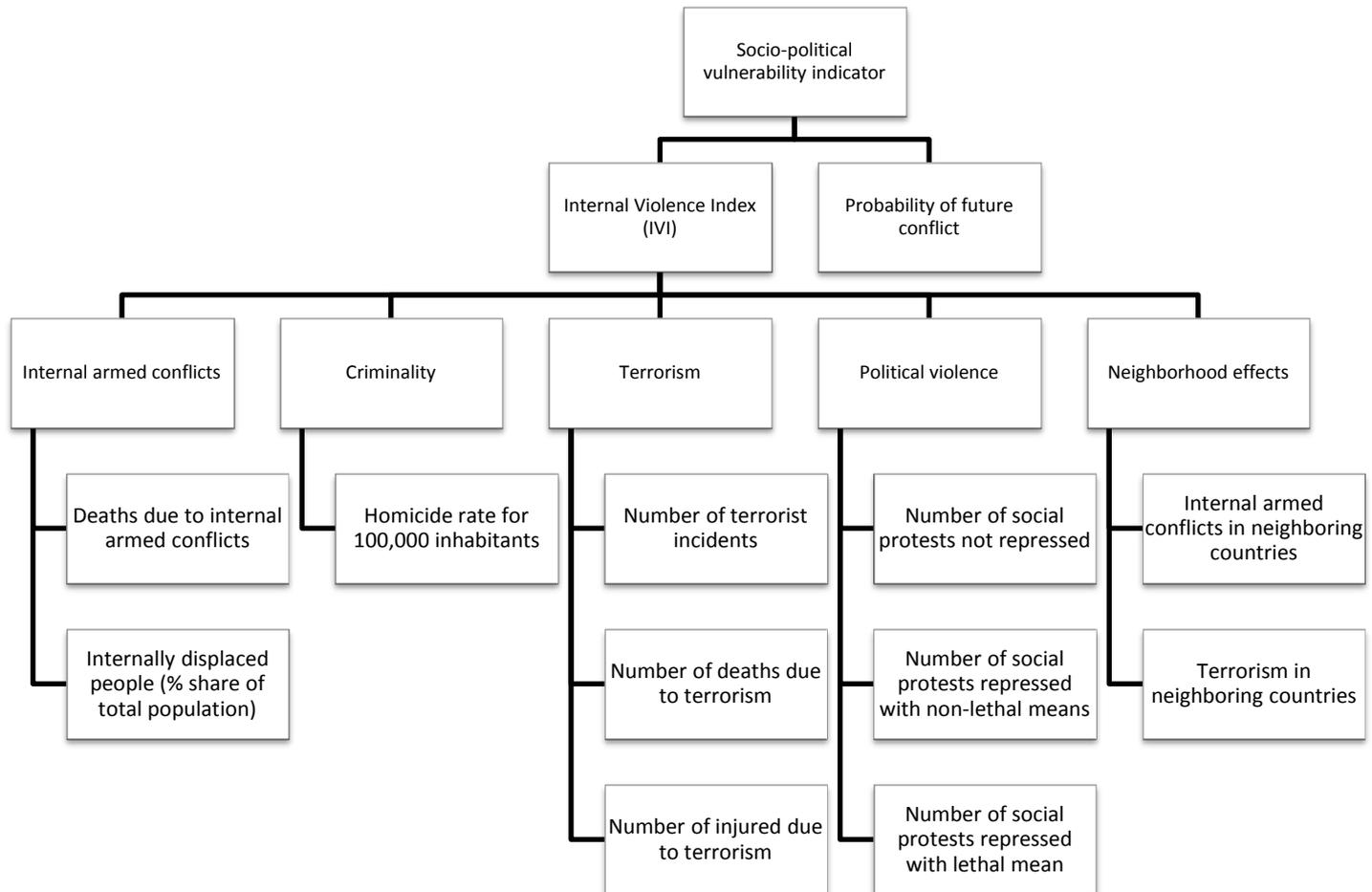
III - What indicators should be used?

Taking into account the structural risk of conflict

- IVI is an indicator of contemporaneous violence in a country. It represents the recent history in terms of violence (T, T-4). It is a rather retrospective indicator considering the delay in data availability for some components.
- IVI thus represents more a measure of past "shocks" of violence than real exposure to shocks. Thus an exposure component would also be necessary in order to measure fragility preventively (along with other indicators).
- A component of structural *risk* of violence would allow IVI to measure both shocks and exposure, reinforcing its structural content.
- This structural component is proxied here by the *probability of future conflict* in the future 5 years estimated by taking into account structural as well as historical factors and using classification trees.



Internal Violence Index (IVI)





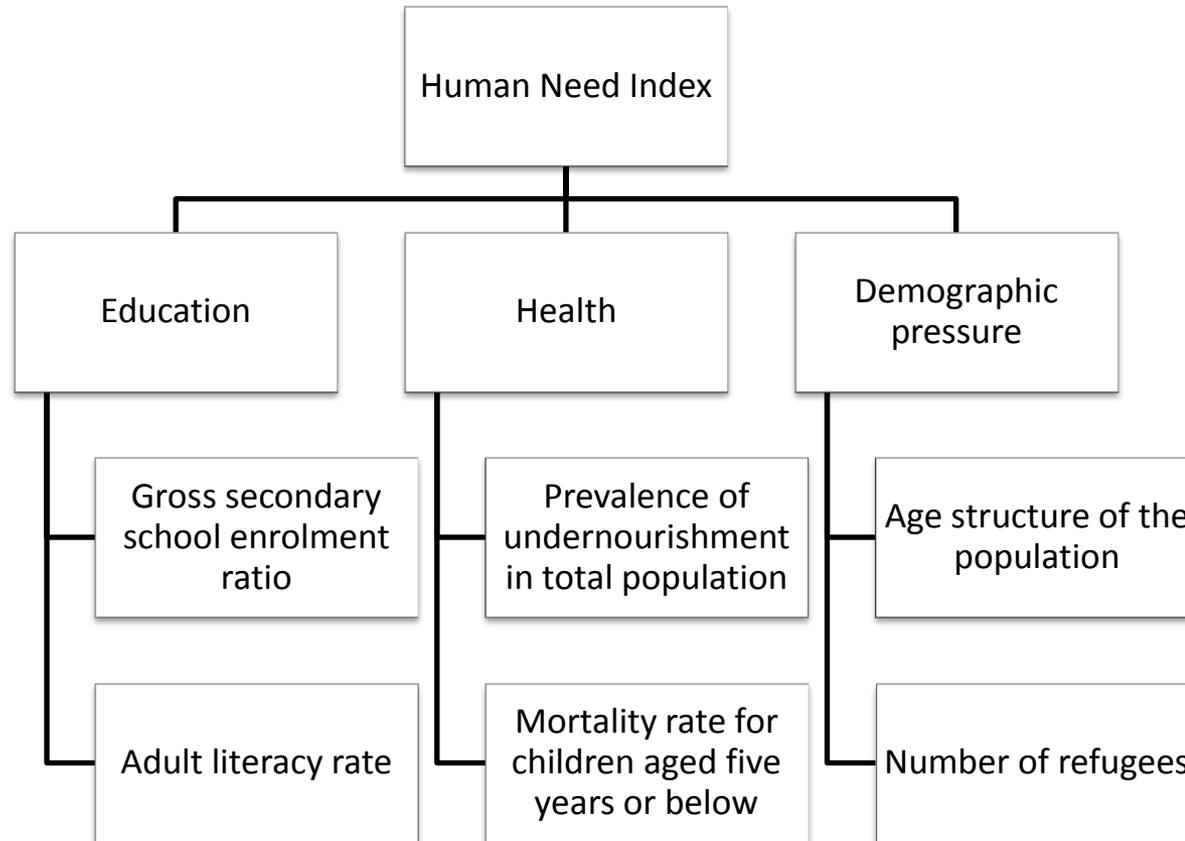
III - What indicators should be used?

A new indicator of specific needs

- Needs mainly reflected through the GNI per capita in the PBA formula...Forgetting the various dimensions of poverty.
- Diagnosis already made by the ADB as illustrated by the new two step approach for the TSF eligibility that takes into account GDP growth, and also human capital. The allocation formula should consistently include indicators of need reflecting various dimensions of poverty
- The Human Assets Index (HAI) including health and education components used by the UN to identify LDCs well adapted to be used in addition to the GNI pc
- But here supplemented by 2 indicators of “demographic pressure”: the *youthness of population* and the *number of refugees*, 2 more exogenous components of a “Human Needs Index”



Human Need Index (HNI)





III - What are the findings of the simulations?

The PVBA – Simulation Framework

- The simulations start from the ADF's allocation model based on 2017 data.
- The impact of the new conceptual framework for allocations is presented as *a percentage of the total envelope at the end of the first phase of the allocation process* (incentives for loans, MDRI, minimum allocation).
- Also applied here are the ceiling of 10% of the total envelope by country, and the discounts for blend countries (-50%) as well as graduating ones (70%)



III -What are the findings of the simulations?

The PVBA – Three options

$$A_i = CPA^{4.125} \times GNIpc_i^{-0.125} \times Pop_i^1 \times VI_i^{0.5} \times HNI_i^{0.25} \quad (1)$$

$$A_i = CPA^{4.125} \times GNIpc_i^{-0.125} \times Pop_i^1 \times VI_i^1 \times HNI_i^{0.5} \quad (2)$$

$$A_i = CPA^{4.125} \times GNIpc_i^{-0.125} \times Pop_i^1 \times VI_i^2 \times HNI_i^1 \quad (3)$$

with

$$CPA = \begin{cases} 0.20 \times CPIA_{ABC} + 0.58 \times CPIA_D + 0.06 \times CPIA_E + 0.16 \times PPA \\ 0.36 \times CPIA_{ABC} + 0.58 \times CPIA_D + 0.06 \times CPIA_E \text{ if no portfolio} \end{cases}$$

$VI_i = 0.33 EVI_i + 0.33 PVCCI_i + 0.33 IVI_i$, synthetic structural fragility index.

A_i : Aid allocated to country under the PBA (or TSF's Pillar I)

GNI/P: gross national income relative to the population

CPA: Country Policy Assessment

CPIA: Country Policy and Institutional Assessment (ABC, D, E Clusters)

PPA: Portfolio Performance Assessment

AIDI: African Infrastructure Development Index

VI: Vulnerability Index (Composite)

EVI: Economic Vulnerability Index

PVCCI: Physical Vulnerability to Climate Change Index

IVI: Internal Violence Index



III - What are the findings of the simulations?

The PVBA – Key Result n°1

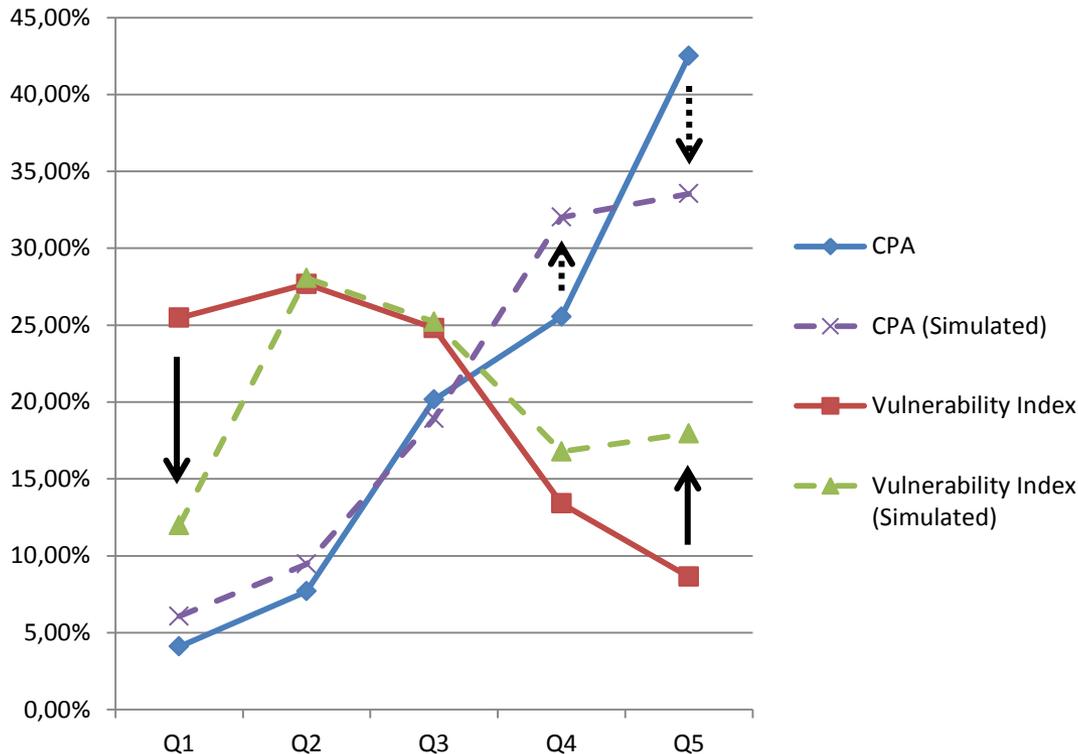
Simulations allow to maintain a positive relationship between allocation and performance while giving more to more vulnerable countries.

This is made possible by favoring vulnerable and performing countries at the expense of performing but less vulnerable ones.

III - What are the findings of the simulations?

The PVBA – Key Result n°1 (graph)

Share of base allocations in the total ADF envelope based on current value and value simulated by Formula 3 of CPA quintiles and the overall Vulnerability Index (VI)



- The positive link between performance and allocation, which is essential in the PBA, is maintained.
- The relationship between vulnerability and allocation is modified.
- The performing and vulnerable countries are then favored at the expense of the performing but less vulnerable countries.



III - What are the findings of the simulations?

The PVBA – Key Result n°2

Simulations allow to maintain the share allocated to the two best CPIA quintiles over 65% (the best performing countries) and at the same time to increase the share allocated to the two more vulnerable quintiles from 22% to 35%.



III - What are the findings of the simulations?

The PVBA – Key Result n°2 (table)

Share of base allocations in the total ADF envelope by CPA and overall vulnerability index (VI) quintiles; current values and values simulated by formulas (1), (2), (3)

CPA	Current PBA	Formula (1)	Formula (2)	Formula (3)
Q1	4.10%	4.79%	6.03%	6.07%
Q2	7.69%	6.46%	6.40%	9.46%
Q3	20.15%	19.04%	18.16%	18.91%
Q4	25.55%	28.93%	31.19%	32.01%
Q5	42.51%	40.77%	38.22%	33.55%
Q4 + Q5	68.06%	69.71%	69.41%	65.56%

Vulnerability Index	Current PBA	Formula (1)	Formula (2)	Formula (3)
Q1	25.48%	23.32%	21.37%	11.98%
Q2	27.67%	27.70%	25.83%	28.07%
Q3	24.81%	26.37%	26.83%	25.21%
Q4	13.41%	12.11%	12.14%	16.78%
Q5	8.64%	10.51%	13.83%	17.96%
Q4 + Q5	22.04%	22.61%	25.97%	34.74%

- While in 2017 the two most vulnerable quintiles among ADF-eligible countries received 22% of PBA allocations, they would have received 35% with the Simulation (3), 26% with the Simulation (2), but only 23% under Simulation (1).
- As for the two best-performing quintiles, while they received 68%, they would have received 66% under Simulation (3), 69% under Simulation (2), and 70% under Simulation (1).



III - What are the findings of the simulations?

TSF Pilar I

- Simulations of allocations of TSF Pilar I under the new formula, especially when equal weight is given to fragility and performance, show that among the countries eligible to the TSF this approach...
- ...strengthens the allocation to the most fragile ones according to the synthetic index of structural fragility, ...
- ...while (within the TSF) it still evidences a positive link between performance and allocation.
- Thanks to a continuous application of criteria, the allocation of Pillar I becomes closely correlated with vulnerabilities, what is currently not the case.



Conclusion

- The simulations show that the formulas proposed for the PVBA and the TSF *combine* the principle of an allocation increasing with the quality of policies (i.e., performance) and that of an allocation increasing with vulnerability.
- Such a reform of the PBA is made consistent with the objectives of transparency, equity, and effectiveness by taking into account the needs of countries resulting from various forms of vulnerability and their uneven intensity, its implementation is perfectly *possible*.
- Moreover, the coexistence of a “Performance and vulnerability based allocation” and a transition support facility allows ADF to target the resources of this facility on the *specific needs of countries in transition*.



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APPENDIX



Regional integration envelope: the same principles may also apply

- Allocation of the regional envelope is treated separately since it corresponds to a specific goal, particularly important in Africa
- But it can be done according to the same principle of combining needs and performance...
- ... the country needs of regional integration, depending on the smallness of domestic market and the remoteness of foreign markets, measured by a specific index: it express a kind of fragility or vulnerability...
- ... and the commitment of the country to regional integration (its performance), such as the cluster E of the CPIA
- Simulations show that this reform too would increase the share of the regional envelope going to fragile countries.