

UNCTAD Summer School

The Green Bond Market: A Potential Source of Climate Finance for Developing Countries

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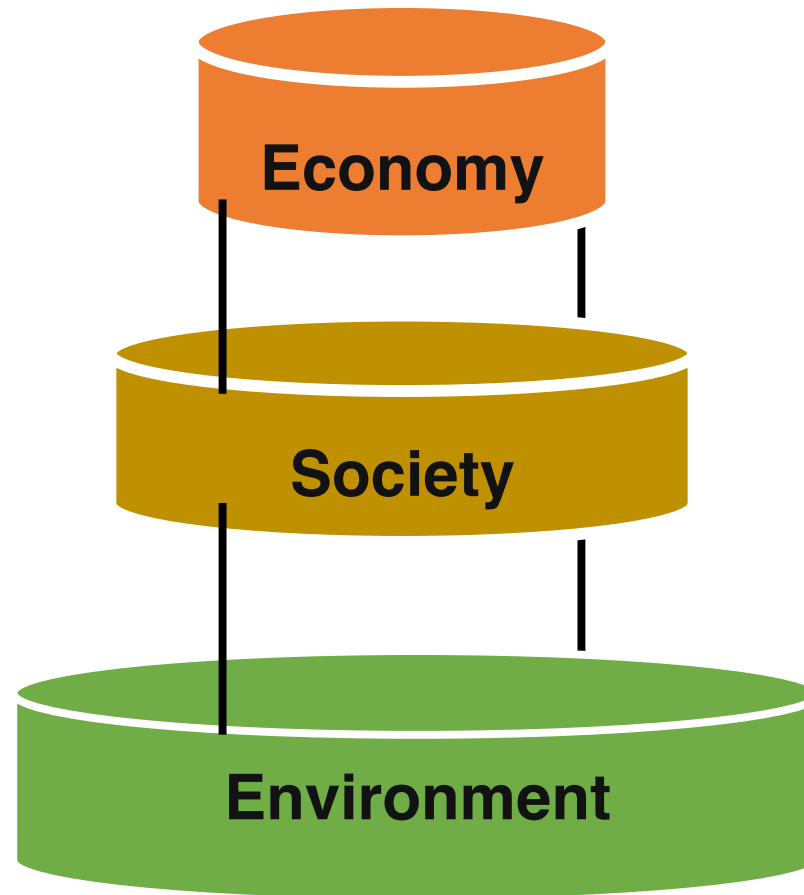
Université Grenoble Alpes



“Climate change is an unprecedented opportunity for governments, investors, firms and citizens to work together to develop and deploy low-carbon technologies, which can sustain growth within our planetary boundaries. Shifting towards low-carbon energy systems can avert climate catastrophe while creating new opportunities for investment, growth and employment”

Koffi Annan

Win- Win- Win strategy



Win- Win- Win strategy

- **WHO: 4.6m dead/year → air pollution.**
- **Zhang et al. (2018): air pollution → low cognitive capabilities**
- **UN: 1 billion environmental migrants by 2050.**

LOW-CARBON TRANSITION



Green bonds

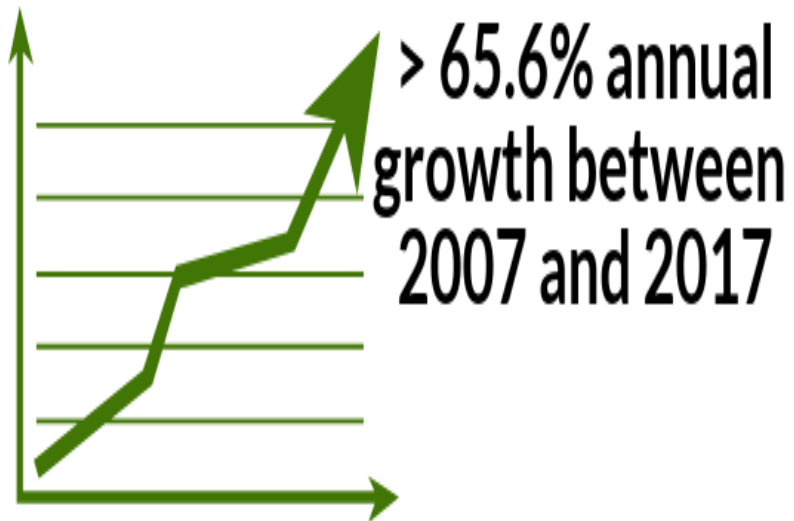


1. Definition
2. Driving factors
3. Barriers
4. Recommendations

Research question

Could developing countries seize this opportunity to finance their adaptation and mitigation projects?

KEY MESSAGES



USD 155.5 billion in 2017 (CBI, 2018).

USD 1 trillion by 2020.

1.4% of the global fixed-income market
Moody's (2017).



< 5% of GB
issuance in
2007-2016

Development banks
Local governments
Investors



1. What is a GB?

Definition:

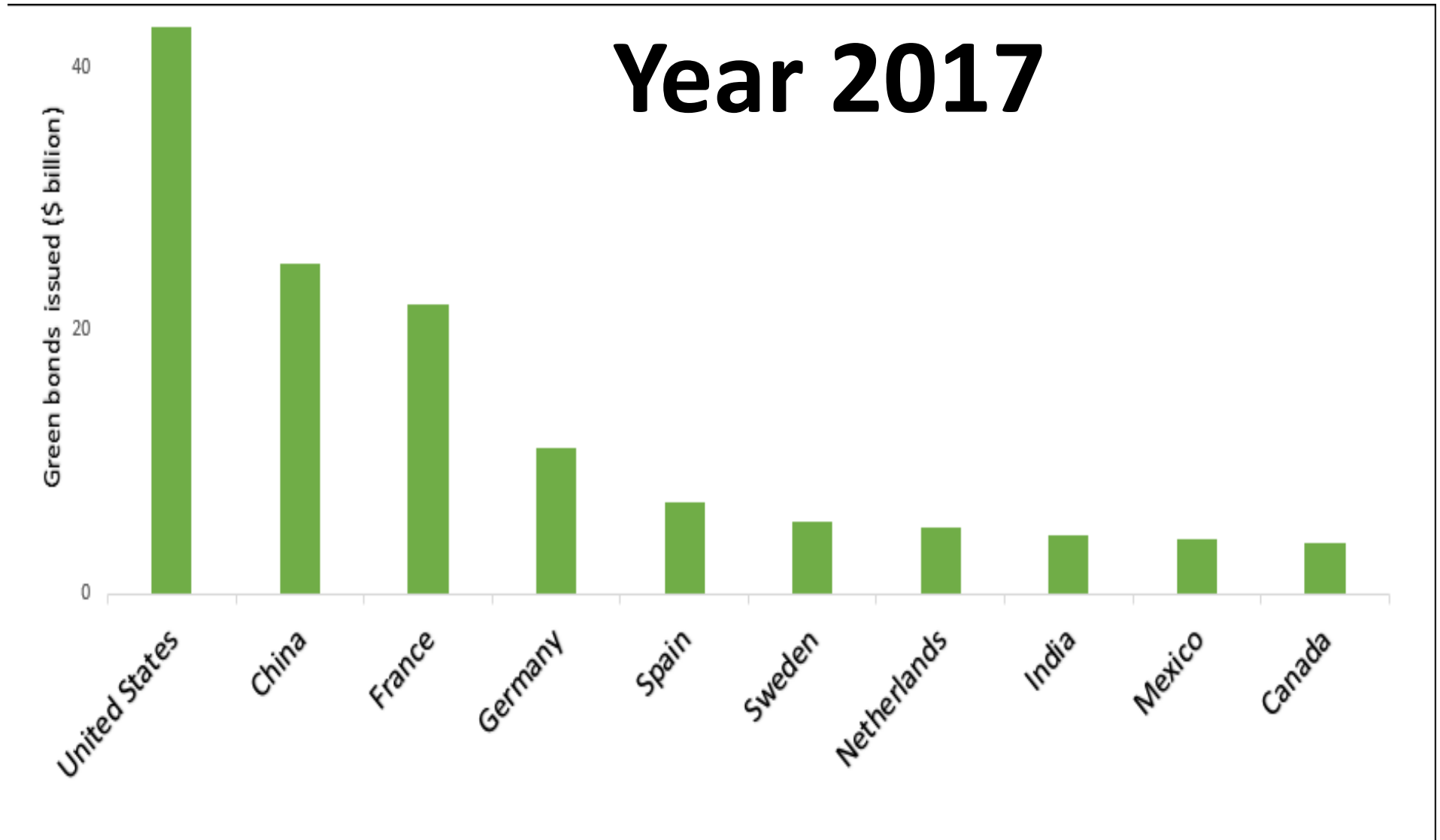
- **No commonly agreed standards;**
- **Green bond principles: Voluntary Process Guidelines for Issuing Green Bonds since 2014;**
- **Green bonds = fixed-income financial instruments for raising capital to finance or refinance eligible green projects (OECD 2017; ICMA 2017).**

Categories of green bonds

- **Certified Green bonds → < 25% in 2017**
- **Self-labelled green bonds → > 75% in 2017**

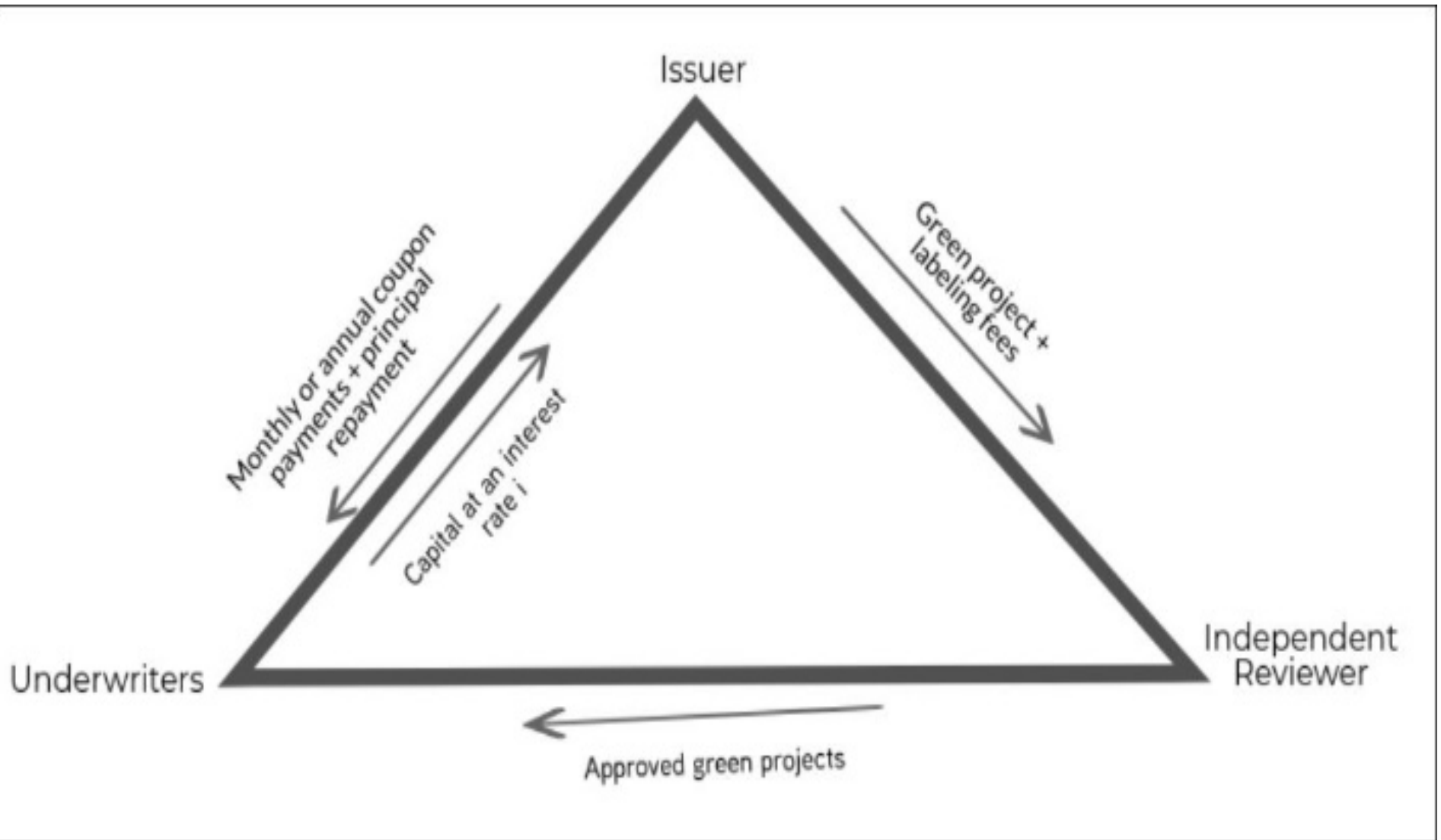
Top 10 green bond country issuers

Year 2017



Source: Climate Bonds Initiative (2017)

How does a certified green bond work?



Source: Author's elaboration

Green bonds principles

1. Use of Proceeds

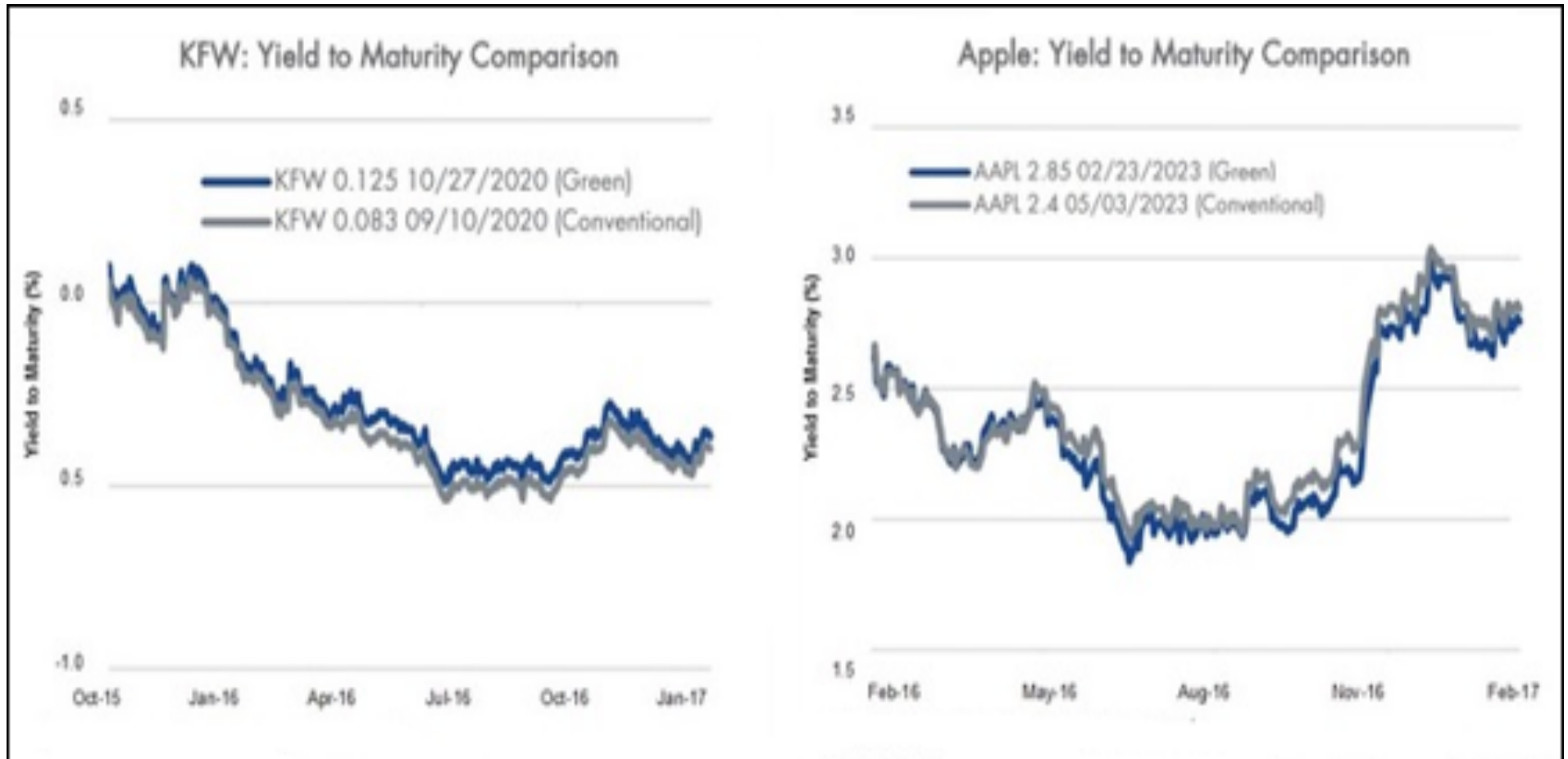
2. Process for Project Evaluation and Selection

3. Management of Proceeds

4. Reporting

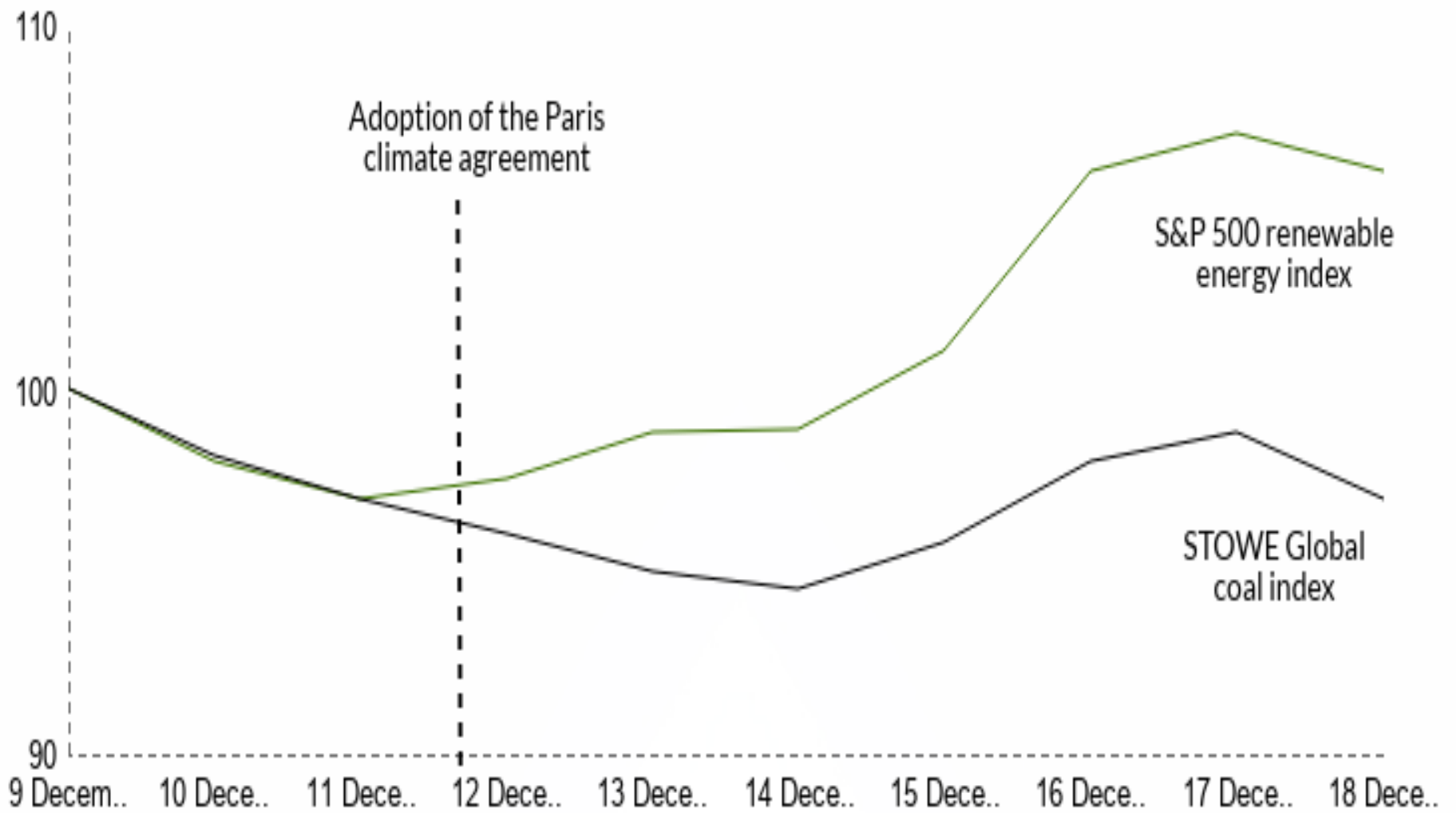
2. Driving factors of the green bond market

Strong similarity between green and conventional bonds



Source: Bloomberg as of 1/31/2017





Source: DNB (2017)

- **Increased climate-awareness**

(Carney, 2016)

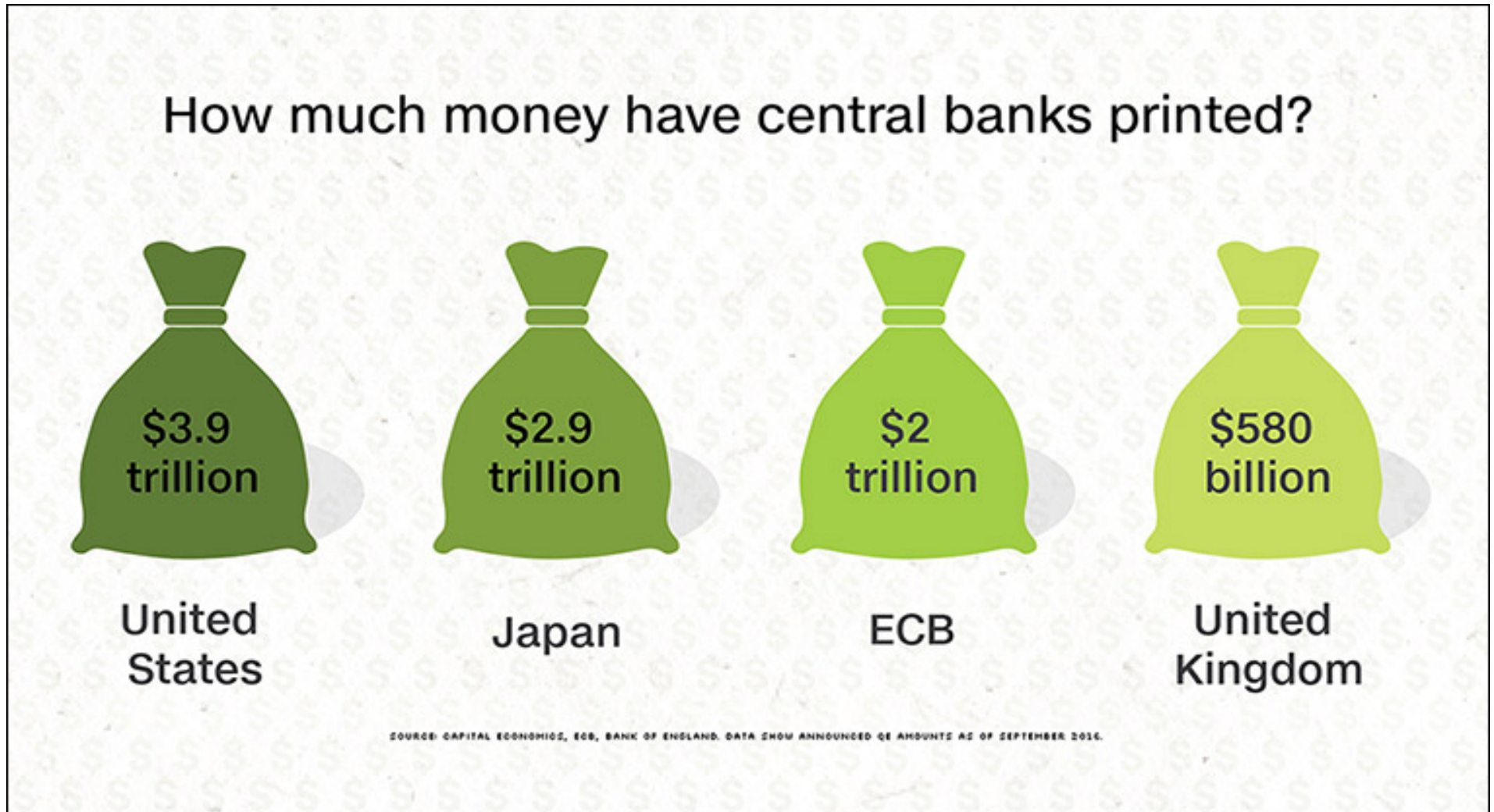
Transition risk: risk of stranded assets

Physical risks: \$3.8 trillion from 1980 to 2012 according to Munich Re.

Liability risk: claims from NGOs, Civil Society, Employees...

TCFD: Task force on climate-related disclosure

- **Low interest rate environment**
\$ 9 trillion

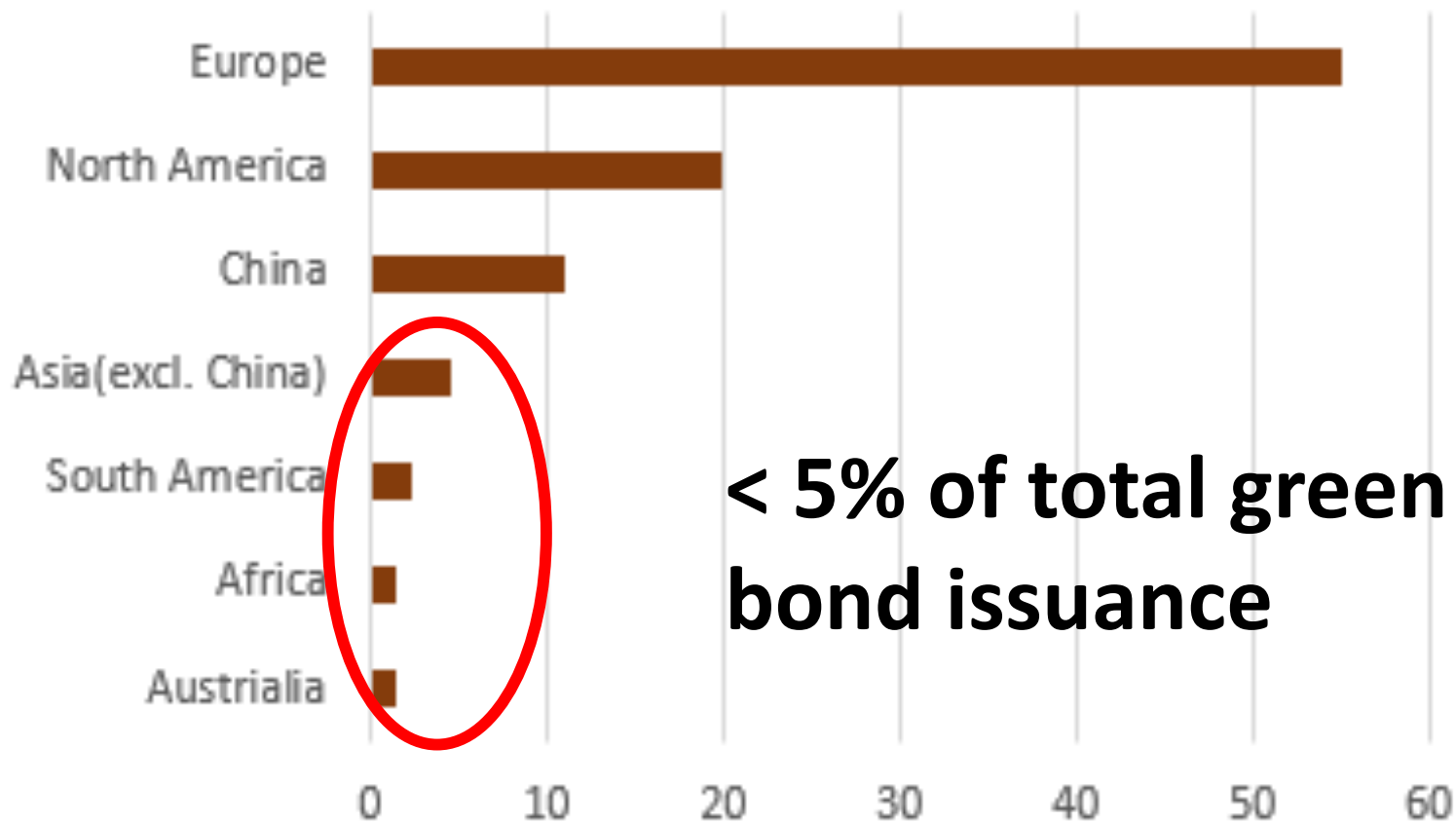


- **“The failure of monetary authorities to achieve economic recovery through accommodative monetary policies has resulted in low-interest rates and hungry for yield, especially in advanced economies” (King 2017).**
- **Consequently, pension funds and insurance companies are coming under pressure to find ways of making their savings products more attractive.**
- **Sustainable investing can preserve wealth and provide reliable streams of revenue, while reducing volatility in the equity markets → Diversification**

3. The barriers of the green bond market in developing countries

Developing countries are far behind developed countries

Figure 3: Global green bonds issued by region 2007-2016 (USD billion)



Source: Statista, 2017

Barriers

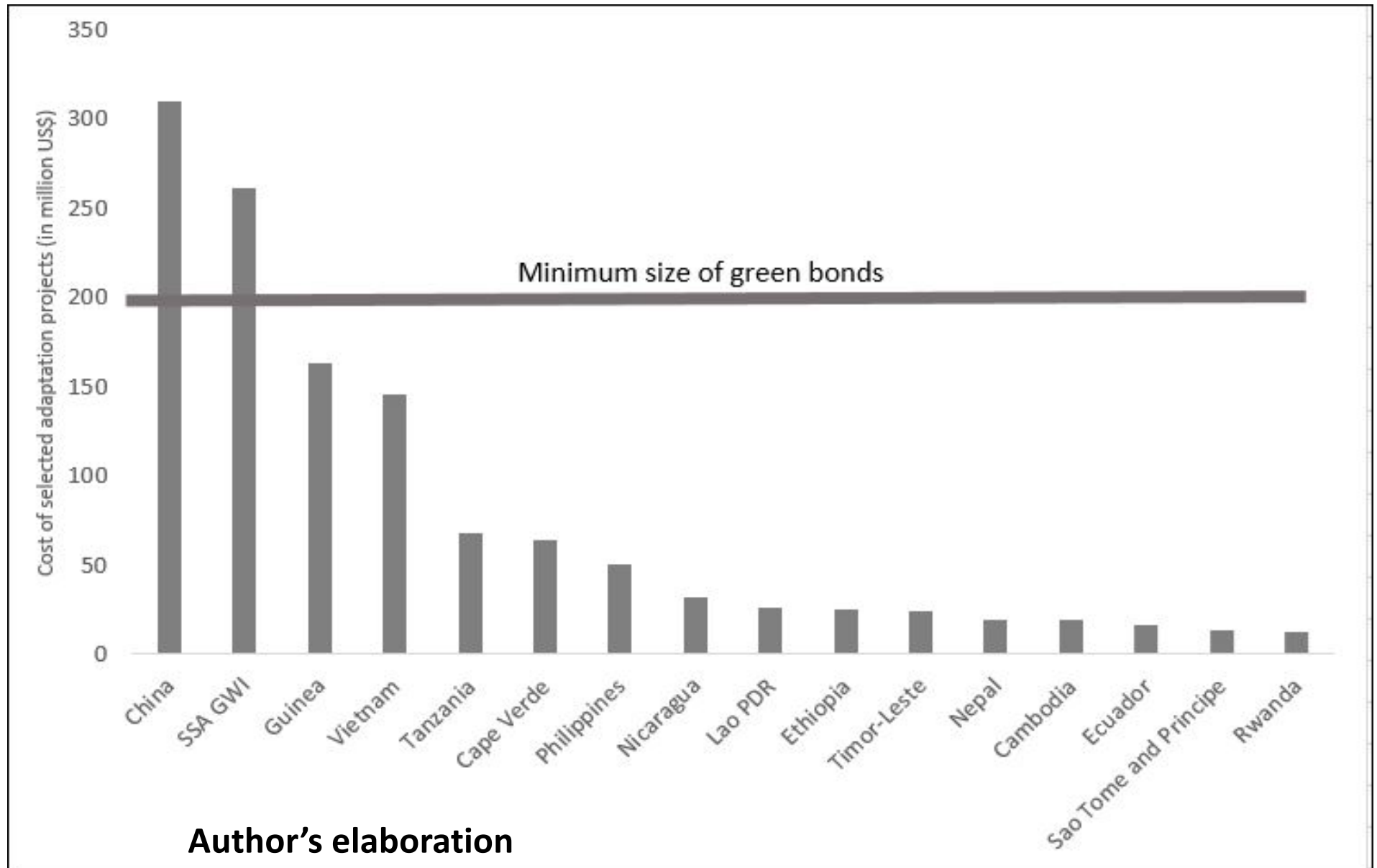
- **Market barriers**
- **Non-market barriers**

Market barriers

- **The issue of minimum size (IMS)**

Bond investors like to see at least USD 200 million equivalent in liquidity before lending their money (Franklin, 2016)

The issue of minimum size



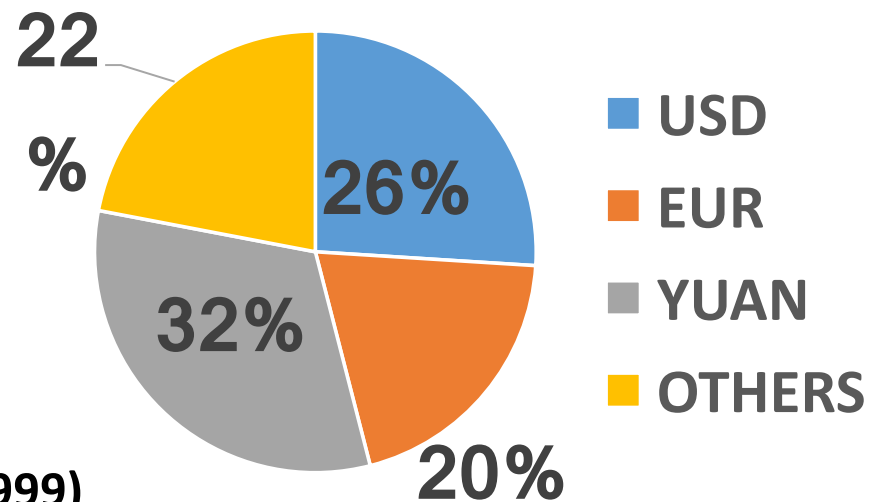
This result is also confirmed by CBI
(2016)

- In 2016, 'Over 68% of bonds issued are between \$100m and \$500m in size. Over 44% of the bonds issued were greater than \$200m in size'

- **High transaction costs (HTC)** could range from USD 10 to 100 thousands → Green labelling (Kaminker et al. 2016)

- **Currency of issue**
“original sin”

(Eichengreen and Hausman, 1999)



Non-market barriers

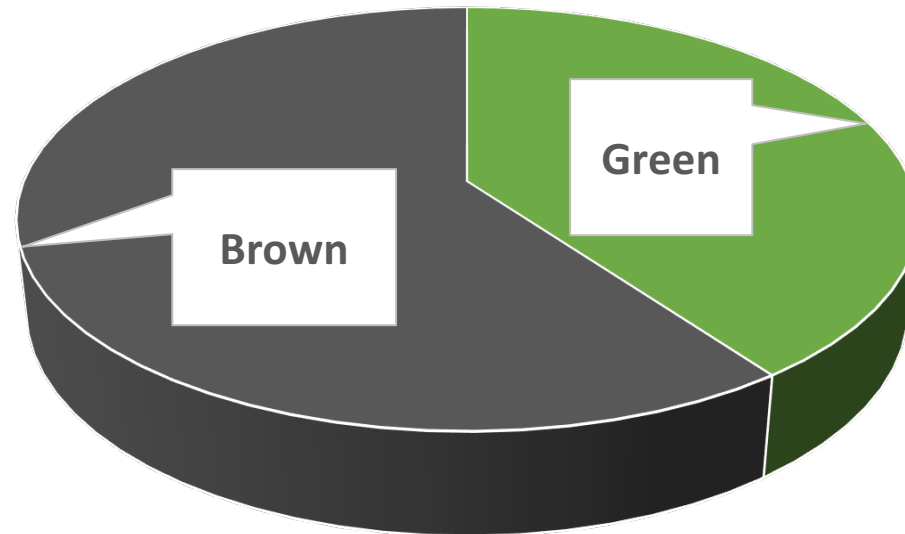
- **Lack of technical skills;**
- **Lack of appropriate institutional arrangement;**
- **Lack of voters' support for climate change policies ;**

(Obradovicha and Zimmerman, 2016)

“Climate change is not a winning electoral strategy”

4. Policy recommendations

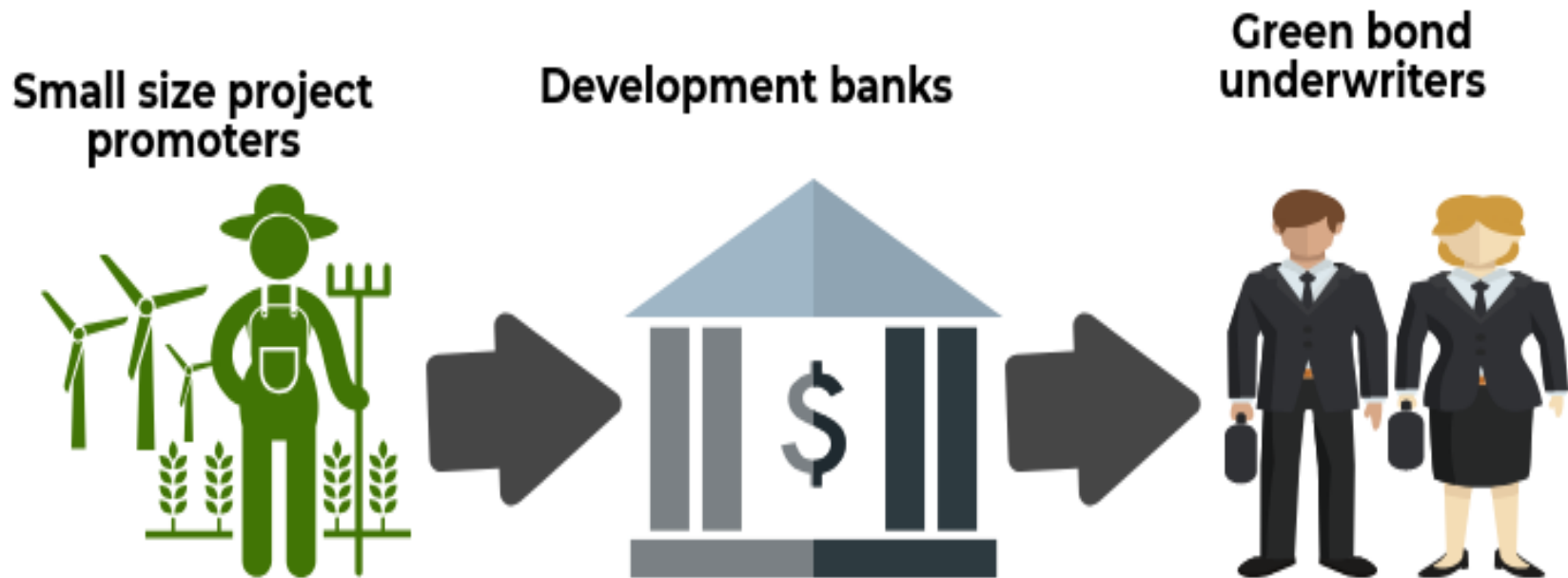
- **Green stripping system (Franklin, 2016)**



- **...but it may give rise to greenwashing behaviors**

Policy recommendations

- **Development banks as intermediary institutions: pooling strategy;**



Policy recommendations

- **Guarantees from local governments**
- **Coordination between the Ministry of finance and the Ministry of environment for sovereign green bond issuance.**

Conclusion



UNCTAD Summer School

September 3-7th

United Nations

Geneva

Thank you





- OECD. Mobilising bond markets for a low-carbon transition. Technical report, EOCED Publishing. Paris, 2017
- Michael Flaherty, Arkady Gevorkyan, Siavash Radpour, and Willi Semmler. Financing climate policies through climate bonds—a three stage model and empirics. *Research in International Business and Finance*, 42:468–479, 2017
- Nick Obradovich and Brigitte Zimmerman. African voters indicate lack of support for climate change policies. *Environmental Science & Policy*, 66:292–298, 2016.

Acknowledgements

References

- Here is the point and you may not agree with me. But I strongly believe that without finance, sustainable development goals mean nothing for developing countries.
- Since I am talking to policy makers and UN bodies officers, let me conclude by saying this: today we have a great opportunity with green bonds to create a green and positive society that actually works the environments and human beings, a society in which no one is left behind, a society of green structural transformation. So let's make not only the United States of America but also the Rest of the world "Green and Great Again". Thank you
- There is a president I don't like to see this figure, otherwise he may be tempted to withdraw twice his country from the Paris climate conference.

- Aaron Franklin. Is green stripping the future of green bonds? *International Financial Law Review*, August 15, 2016.
- Climate Bonds Initiative. Green bonds highlights 2016. Technical report, Climate Bonds Initiative. UK., 2016.
- OECD. Mobilising bond markets for a low-carbon transition. Technical report, OECD Publishing. Paris, 2017
- Michael Flaherty, Arkady Gevorkyan, Siavash Radpour, and Willi Semmler. Financing climate policies through climate bonds—a three stage model and empirics. *Research in International Business and Finance* 42: 160–170, 2017.