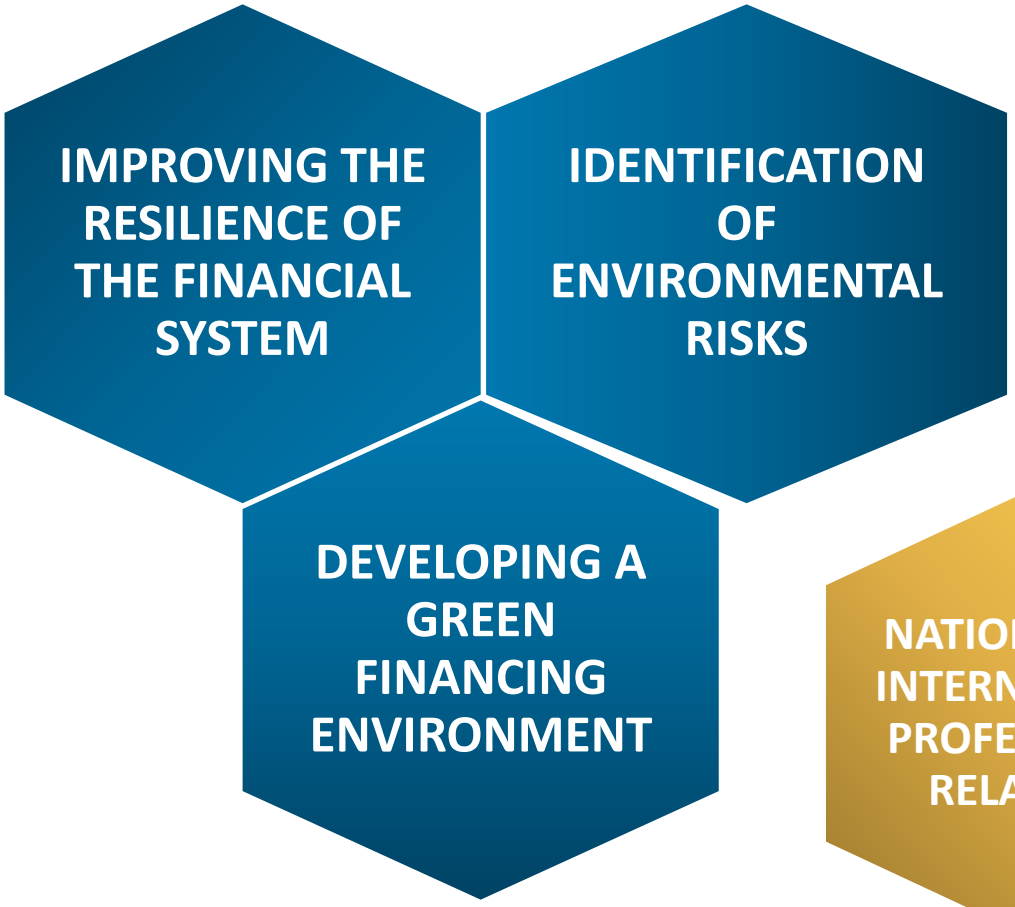
Donát Kim | Head of unit

THE HUNGARIAN GREEN PREFERENTIAL CAPITAL REQUIREMENT

THE GREEN PROGRAMME, LAUNCHED IN 2019, IS BASED ON A HOLISTIC APPROACH



P1

Financial system measures

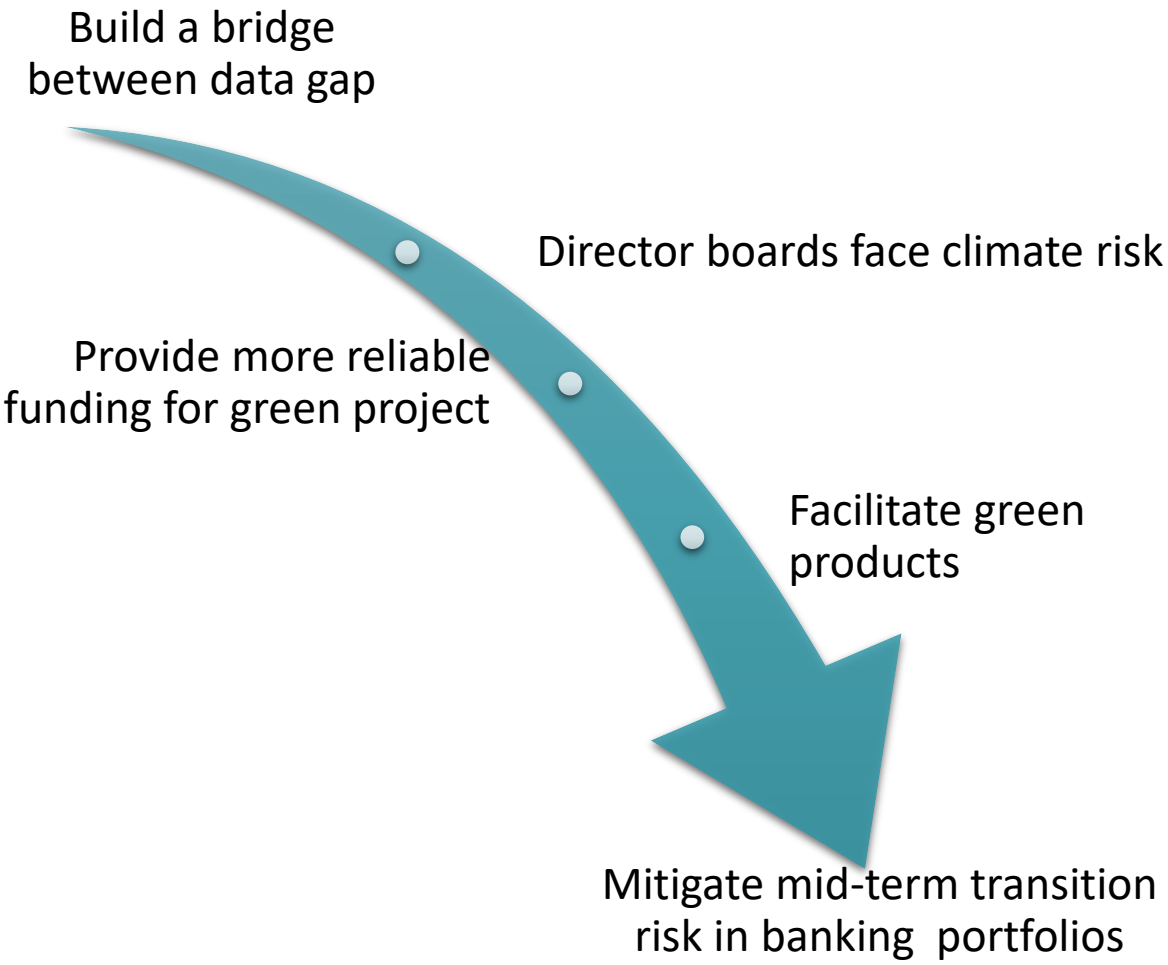
P2

Relations

P3

MNB's own operation

THE PURPOSE OF THE GREEN CAPITAL REQUIREMENTS



GREEN LOANS OUTSTANDING TO COMPANIES AND LOCAL GOVERNMENTS ARE ELIGIBLE FOR CAPITAL DISCOUNT

Requirements of the programme are:

- Loans after 2020. January 1st
- Financing one of the programmes objectives
- Banks are required to report green information concerning loans included in the programme
- Originally available until 2025, deadline review in progress

First period of use:

- ICAAP review of 2021

Capital discount:

- 5% or 7% of each eligible gross exposure
- Discount rate varies between industries and the type of standards adhered to (in most cases EU Taxonomy triggers 7% and the Climate Bond Initiative Taxonomy 5%)
- The discount reduces the Pillar II capital requirements
- The preferential capital treatment may not decrease the capital requirement of the exposure below 0
- The preferential capital treatment cap is set at 1.5% of the institutions total RWA/TREA
- Green loans in the programme should receive 30 bps interest discount

GREEN PREFERENTIAL CAPITAL REQUIREMENT FOR CORPORATES AND MUNICIPALITIES, PURPOSES OF CREDIT

Renewable energy	• Renewable energy accounts for 94% of the loans in the preferential capital requirement program. • The key sector achieving the 2050 climate neutrality target is the energy sector, which also requires the most financial investment. • Solar energy accounted for 83 percent of the renewable energy ratio.
Agricultural	• Despite significant and still high-quality agricultural land, sustainability considerations are less prevalent. • In addition to GHG emissions, sustainable water management and biodiversity are also key issues.
Electro-mobility	• According to calculations of the Future Mobility Alliance, there were 18.8 thousand electric cars in Hungary in October 2021, which will increase to 125 thousand by 2026. • BME, in cooperation with the MNB, is developing an electric car calculator.
Commercial real estate	• 1) EU Taxonomy Compliance 2) Taxonomy tailored to Hungarian specifities 3) International Real Estate Rating • They were mostly office buildings, concentrated in Budapest.

GREEN PREFERENTIAL CAPITAL TREATMENT IN SUPPORT OF GREENING BANKING PORTFOLIOS

Summary of 2021

HUF 69 billion
Green bonds (NKP)

HUF 218 billion
Renewable energy and electromobility loans

HUF 287 billion
Total outstanding

Supported activities

Green bonds

Renewable energy

Sustainable agriculture

Energy efficiency

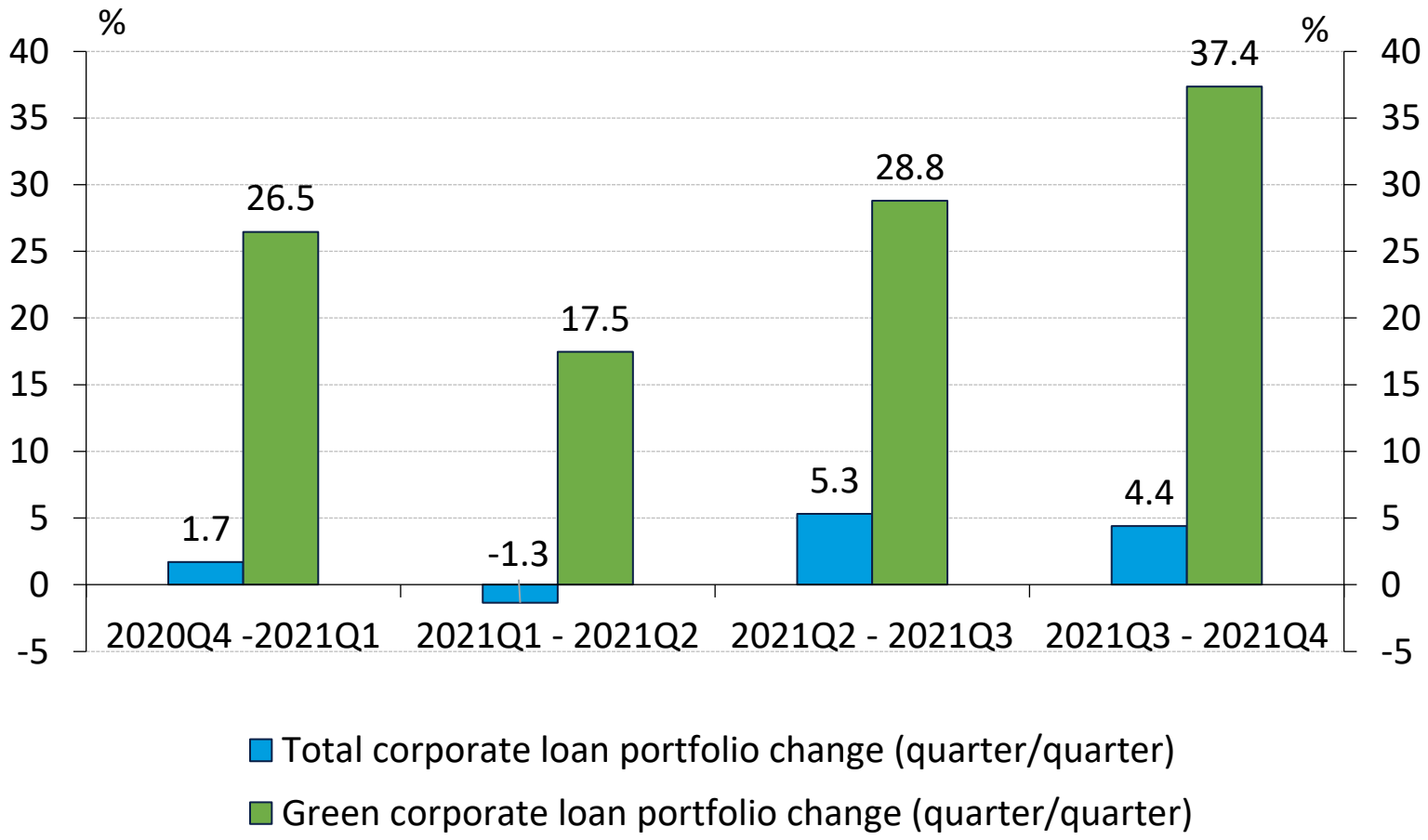
Electromobility

Loans given through green loan frameworks

2022 March extension

Sustainable commercial buildings

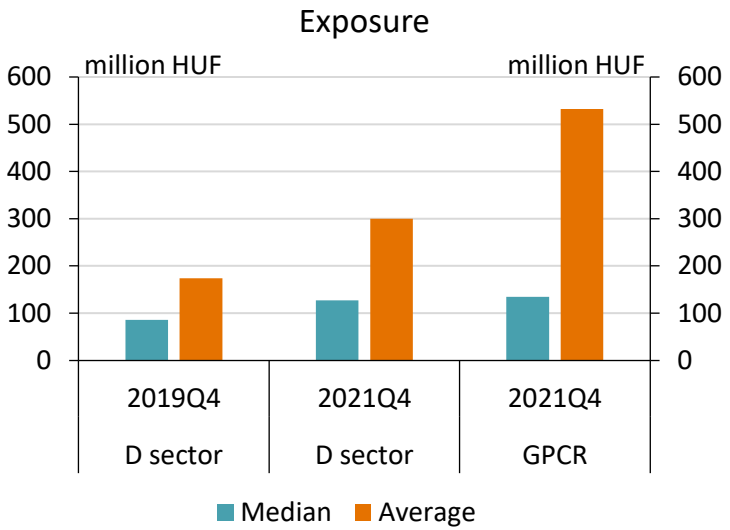
GROWTH OF GREEN CORPORATE LOANS VS. CORPORATE LOANS

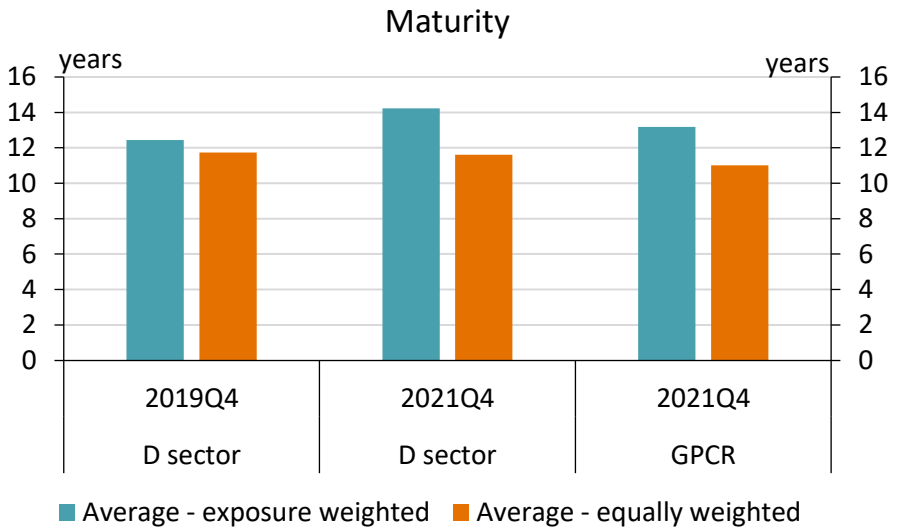


EXAMPLE FOR CAPITAL DISCOUNT CACULATION

Capital discount calculation for a theoretical loan		Calculation
Capital discount	5,0%	
Gross Exposure	€ 500 000,00	
Type of interest	Annuity	
Original interest rate	3,0%	
Modified interest rate	2,7%	= 3,0%-30 bps
Loan term	10 Years	
Interest discount (remaining) term	3,5 Years	
Capital discount (approx)	€ 25 000,00	= € 500 000*5,0%
Cost of Equity	12%	
Gain from capital discount (first year approx)	€ 3 000,00	=€ 25 000*12%
Loss from interest rate discount (first year approx)	-€ 1 500,00	= €500 000*0,3%
Total gain or loss	€ 1 032	= GPCR NPV - Original NPV

LOANS IN THE PROGRAM HAVE SIMILAR CHARACTERISTICS TO THE ELECTRICITY SECTOR





D sector stands for the electric generation sector. Only investment purpose credit is considered. Stock values are displayed.

The representative ticket size of loans included in GCPR is close to the sector

Due to a few larger outstanding loans, the average size is substantially higher

The maturity of loans in the GCPR is longer than the 5-year horizon of the program

Loan maturity in the program is close to the sector average

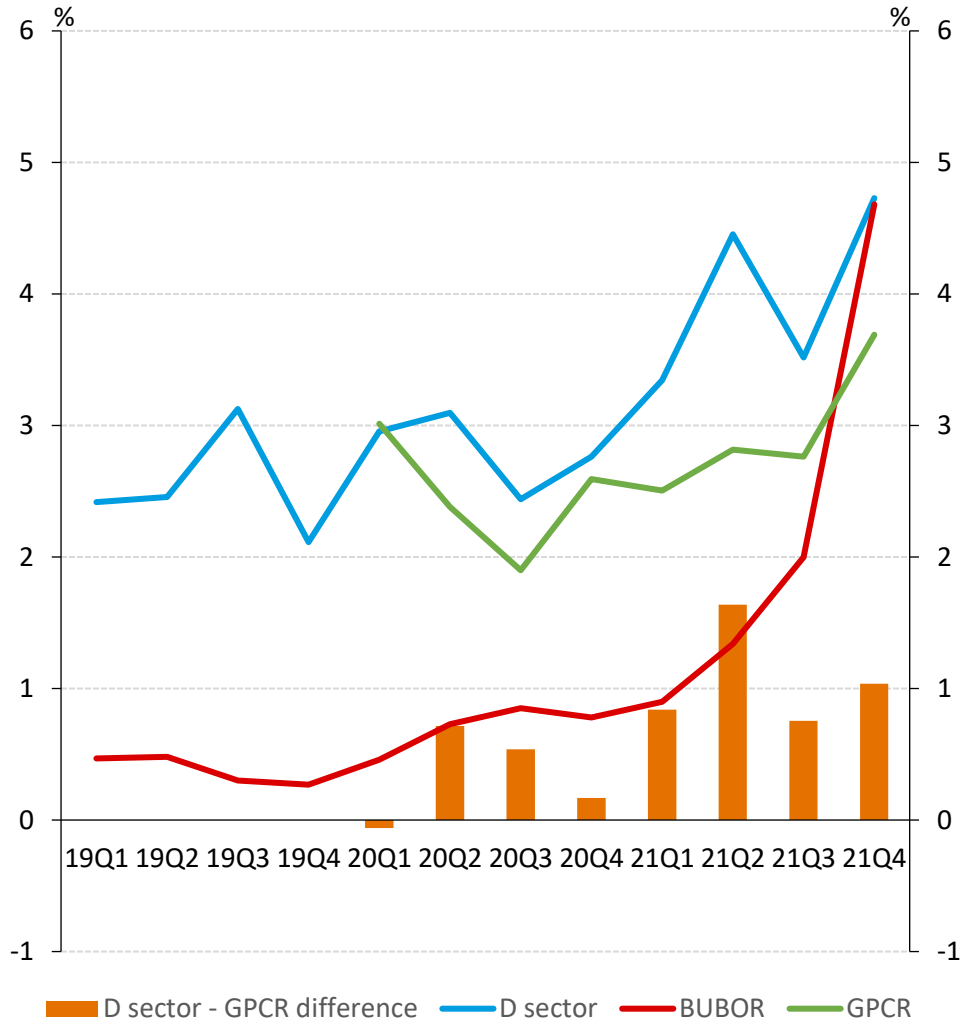
FAVORABLE FINANCING FOR GREEN ENERGY DUE TO THE PROGRAM

The loans participated in the GCPR had lower financing costs in the past years compared to other loans directed to electricity generation

The difference is robust across years and is around 0,7 percentage point

This evidence suggests that banks shared the reduced cost of capital with the financed corporates

Rising interest rates effect the recently issued loans in the program as well



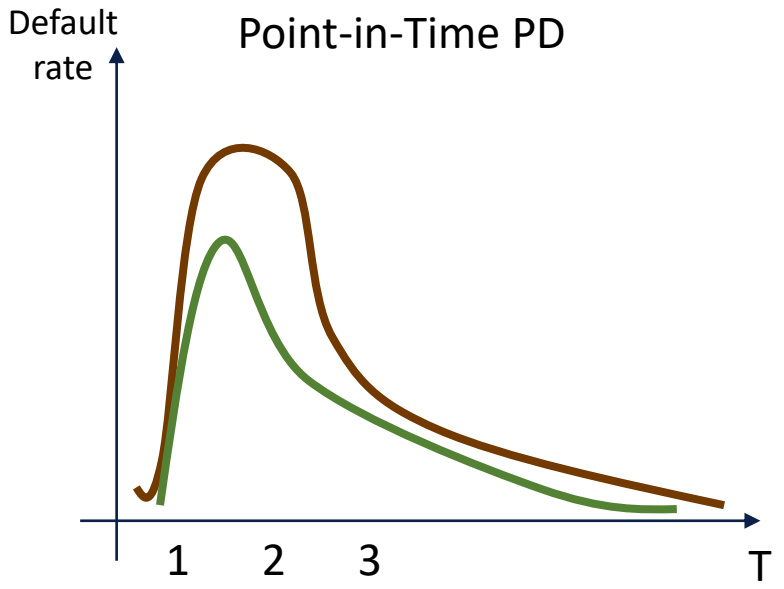
AVERAGE INTEREST RATE DEVELOPMENT OF ELECTRIC GENERATION

Indicator for the D sector and GCPR are exposure weighted means. Only electric generation and investment purpose credit is considered.

DO THEY FACE DIFFERENT CHALLENGES SOON?

In the current economic term, is there any risk diffential in the energy sector? Is renewable energy less risky than traditional energy generators?

- If we could find evidence, that means financial sector has a short-term interest.



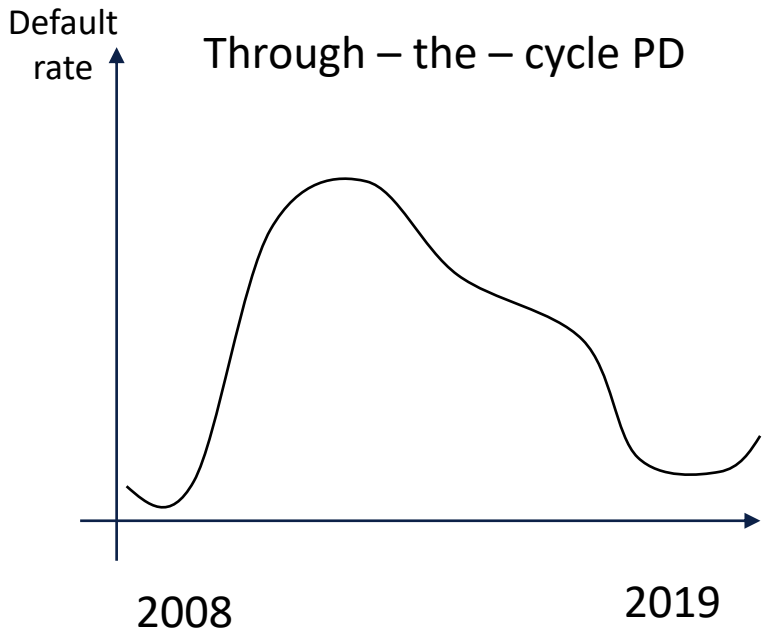
Dependent variables:

Capital leverage	Sales growth rate	ROA	Change in ROA	Debt coverage
Liquidity ratio	Export ratio	Change in tangible assets	Company size	GDP

IS THERE RISK DIFFERENCE TROUGH LIFETIME

From past data could we find any evidence that renewable energy companies are less risky?

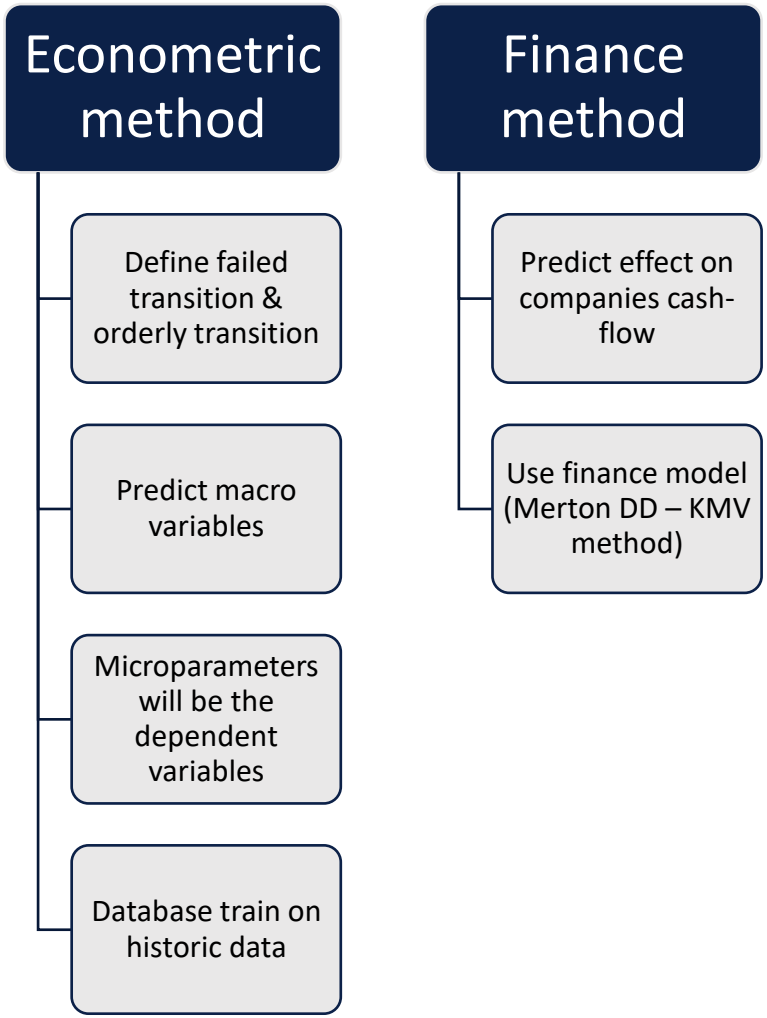
- If they are less risky it could mean, that „healthier” companies invest in green area.
- Question of causality



Dependent variables:

- Long term liquidity
- Short term liquidity
- Productivity rate
- Capital leverage
- Debt coverage
- Company size

RISK DIFFERENCE: QUESTION OF THE FUTURE?



ANY QUESTIONS?