Universität Hamburg
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FAKULTÄT
FÜR WIRTSCHAFTS- UND
SOZIALWISSENSCHAFTEN

# Finanzmärkte als „Game Changer“ für Klimaschutz? – noch nicht!

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# Agenda

## Six thoughts on financial markets and climate change:

- A vision
- A lot is going on
- Relevance is acknowledged
- Reality looks different
- Conclusion: knowledge-action gap
- Implication: invert the logic of the big bet

# A Vision

"Whatever form economic development takes, banks and investors play a central role in the allocation of capital through their financing function. […] Whatever form sustainable development takes, banks and investors can be seen as key drivers—or obstacles to it."

Busch, Bauer, Orlitzky (2015),
Business & Society 55(3): 303-329

"Financial policymakers will not drive the transition to a low-carbon economy. Governments will establish the climate policy frameworks, and the private sector will make the necessary investments."

Mark Carney, Governor Bank of England,
European Commission Conference, 21 March 2019

# A lot is going on

GLOBAL INVESTOR COALITION ON CLIMATE CHANGE

GREEN CLIMATE FUND

Inquiry: Design of a Sustainable Financial System

CITIES CLIMATE FINANCE LEADERSHIP ALLIANCE

ASIA INVESTOR GROUP ON CLIMATE CHANGE

IIGCC Institutional Investors Group on Climate Change

CDP DRIVING SUSTAINABLE ECONOMIES

IFC International Finance Corporation WORLD BANK GROUP

CLIMATE POLICY INITIATIVE

OECD BETTER POLICIES FOR BETTER LIVES

EQUATOR PRINCIPLES

PRI Principles for Responsible Investment

The Green Bond Principles

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

VFU

FNG-SIEGEL 2020

Climate Action 100+ Global Investors Driving Business Transition

UNEP FINANCE INITIATIVE CHANGING FINANCE, FINANCING CHANGE

EU HIGH-LEVEL EXPERT GROUP ON SUSTAINABLE FINANCE

Ceres

Portfolio Decarbonization Coalition

Natural Capital Declaration Financial sector leadership on natural capital

PSI Principles for Sustainable Insurance

Investor Group on Climate Change

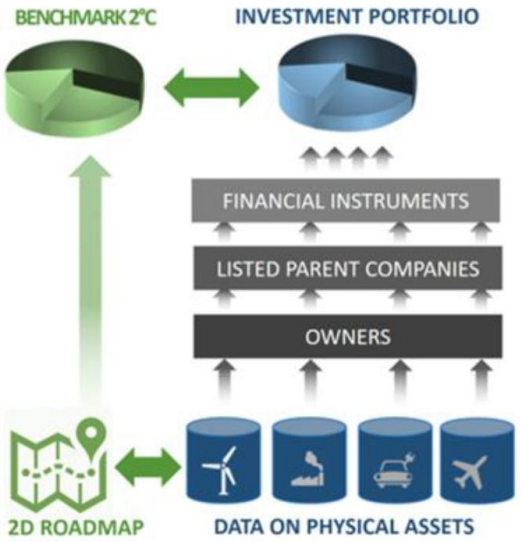
# Relevance is acknowledged

- **Stranded assets**: 33 % of oil, 50% of gas, and 80 % of coal reserves should remain unused in order to meet the 2 °C target (McGlade & Ekins, 2015, Nature 517)
- **Top global risk:** Climate change is increasingly recognized by businesses and investors as one of the top global risks (WEF, 2019)
- **Widespread divestments**: Norway Pension Fund (2015), Rockefeller Family Fund (2016), Ireland Strategic Investment Fund (2017), Allianz (2018), Munich Re (2018), ….
- **Practical guidance**: On behave of the Financial Stability Board (FSB) the Task Force on Climate-related Financial Disclosures (TCFD) published recommendation how to disclose information about the risks and opportunities presented by climate change
- **Policy action**: EU-Report "Financing Sustainable Growth" calls for new transparency and labeling efforts; lays out the basis for extending the established risk appraisals towards carbon and climate issues

# Reality looks different (I): institutional investors

A study on behave of BAFU (Swiss federal office for the environment) asks:

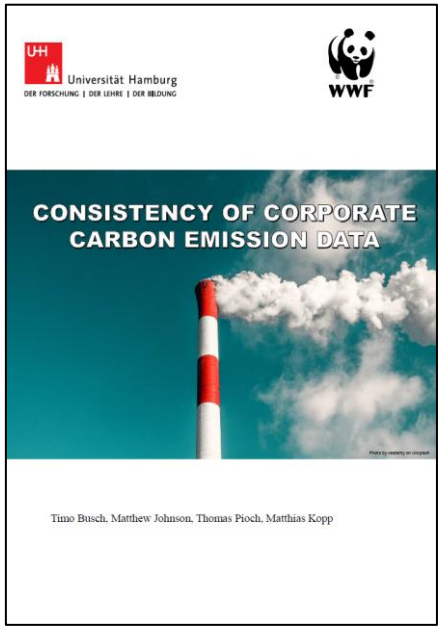
Are the financial portfolios – specifically the portfolios invested in equity and corporate bonds markets – of Swiss pension funds and insurance companies consistent with the 2°C climate goal?



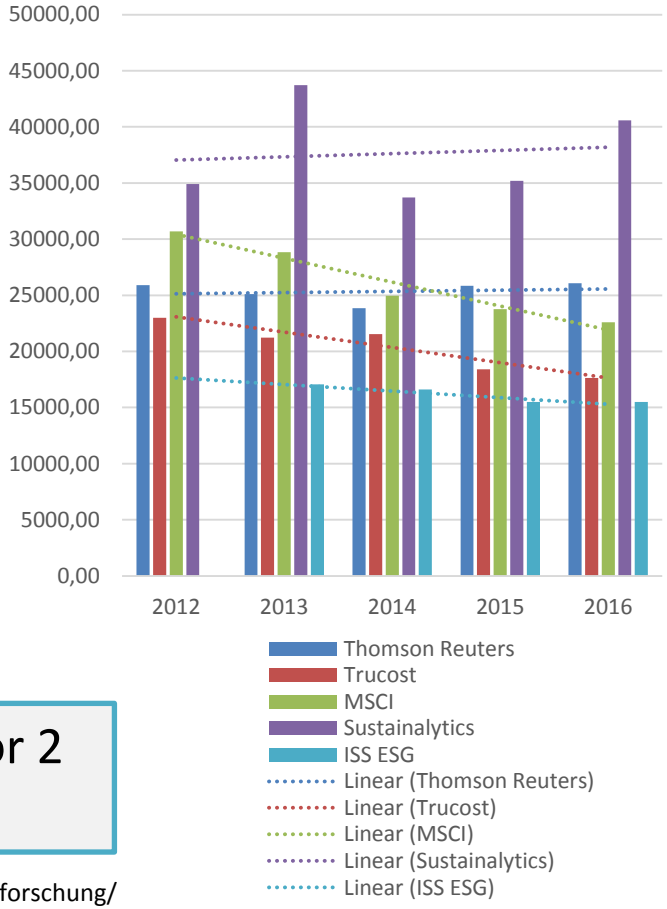

⇒ Collectively, the financial flows underlying the corporate bonds and listed equity portfolios of Swiss pension funds are currently on a 6°C pathway

Source: 2°Investing Initiative / PICTA (2017)

# Reality looks different (II): reliable data




Example: combined estimated scope 1&2 emissions for a single company from 2012-2016. Each column represents data from a different provider




⇒ Emission levels can differ by more than factor 2
⇒ Even trends can differ

Source: Busch, Johnson, Pioch, Kopp (2018); Download: https://www.wiso.uni-hamburg.de/forschung/forschungsschwerpunkte/sustainable-finance/03-topics.html

# Reality looks different (III): financial performance

| | ROA | TQ | $ROA_{EU}$ | $ROA_{US}$ | $TQ_{EU}$ | $TQ_{US}$ | $ROA_{ETS}$ | $ROA_{NOETS}$ | $TQ_{ETS}$ | $TQ_{NOETS}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| CP | −0.055*** | −0.032*** | −0.049* | −0.048** | −0.013** | −0.040*** | −0.063 | −0.049* | −0.006 | −0.017** |
| | (0.009) | (0.003) | (0.019) | (0.015) | (0.004) | (0.007) | (0.053) | (0.022) | (0.011) | (0.005) |
| Size | 0.188*** | 0.303*** | 0.269*** | 0.210*** | 0.310*** | 0.312*** | 0.328*** | 0.243*** | 0.278*** | 0.308*** |
| | (0.011) | (0.005) | (0.025) | (0.024) | (0.009) | (0.010) | (0.046) | (0.029) | (0.014) | (0.012) |
| Risk | −0.077*** | −0.025*** | −0.068*** | −0.092*** | −0.026*** | −0.038*** | −0.133*** | −0.049** | −0.045*** | −0.024** |
| | (0.006) | (0.003) | (0.013) | (0.014) | (0.006) | (0.006) | (0.031) | (0.015) | (0.011) | (0.009) |
| Cap.-Int. | 0.284*** | 0.225*** | 0.308*** | 0.358*** | 0.226*** | 0.251*** | 0.378*** | 0.268*** | 0.242*** | 0.213*** |
| | (0.023) | (0.010) | (0.043) | (0.042) | (0.017) | (0.016) | (0.082) | (0.054) | (0.025) | (0.024) |
| Cash Flow | 0.515*** | 0.060*** | 0.435*** | 0.539*** | 0.052*** | 0.064*** | 0.564*** | 0.351*** | 0.055*** | 0.049*** |
| | (0.022) | (0.005) | (0.046) | (0.056) | (0.009) | (0.013) | (0.084) | (0.056) | (0.013) | (0.012) |
| Observations | 27083 | 27083 | 6240 | 6104 | 6240 | 6104 | 1952 | 3276 | 1952 | 3276 |
| $R^2$ | 0.157 | 0.482 | 0.135 | 0.142 | 0.555 | 0.519 | 0.180 | 0.113 | 0.534 | 0.559 |

Note: ROA = return on assets, TQ = Tobin's Q, EU = European Union, US = United States, ETS = emission trading system, Cap.-Int. = capital intensity
Numbers in parentheses are the heteroescedasticity-robust standard errors.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

⇒ Analysis over 10 year timeframe; more than 27'000 firm-year observations
⇒ Carbon performance (CP) is negatively related to financial performance

Source: Busch, Bassen, Lewandowski, Sump (2016), Working Paper Research Group on Sustainable Finance, University of Hamburg

# Conclusion: knowledge-action gap

⇒ 16 years ago



⇒ 8 years ahead

The carbon budget for reaching the 1.5°C target at current emission levels
(https://www.mcc-berlin.net/en/research/co2-budget.html)

# Implication (I): invert the logic of the big bet

- Currently, there is the big bet that climate policy will fail
- Inverting the bet: stringed and reliable policy needed!
- Foremost: *(certainty about)* a carbon price
- Important further steps:
  - **Risk appraisals**: Help actors implementing TCFD recommendations, notably regarding how to incorporate forward looking data
  - **GHG accounting & reporting**: universally accepted standard and broad application
  - **GHG estimation methods**: Increase transparency & extend scope of data coverage (esp. regarding SMEs)

# Implication (II): invert the logic of the big bet

| | |
|---|---|
| Short-Termism | Long-Termism |
| Predictability of the Future | Systems Interconnectedness |
| Price Efficiency | Carbon Price Dynamics |
| Risk-Adjusted Returns | Active Ownership |

Source: Louche, Busch, Crifo, Marcus (2019): Financial Markets and the Transition to a Low-Carbon Economy: Challenging the Dominant Logics, Business & Society 32 (1): 3-17

# Implication (III): invert the logic of the big bet

EU ETS Directive, October 13th 2003

Kyoto-Protocol enters force, February 16th 2005
1st phase of EU ETS, January 1st 2005

Kyoto-Protocol, December 11th 1997


Nuclear phase out under Schröder, June 11th 2001

Financial crisis, 2008 onwards
(2nd phase of EU ETS, January 1st 2008)

Fukushima accident, March 11th 2011
Nuclear phase out under Merkel, June 30th 2011

3rd phase of EU ETS, January 1st 2013
Hambacher forest protests, 2013 onwards