

Accelerating Sustainable Finance through Emerging Technologies



Stockholm Green
Digital Finance

Green and Sustainable Financial Sector
Copenhagen Business School, 23 January 2020
Cecilia Repinski

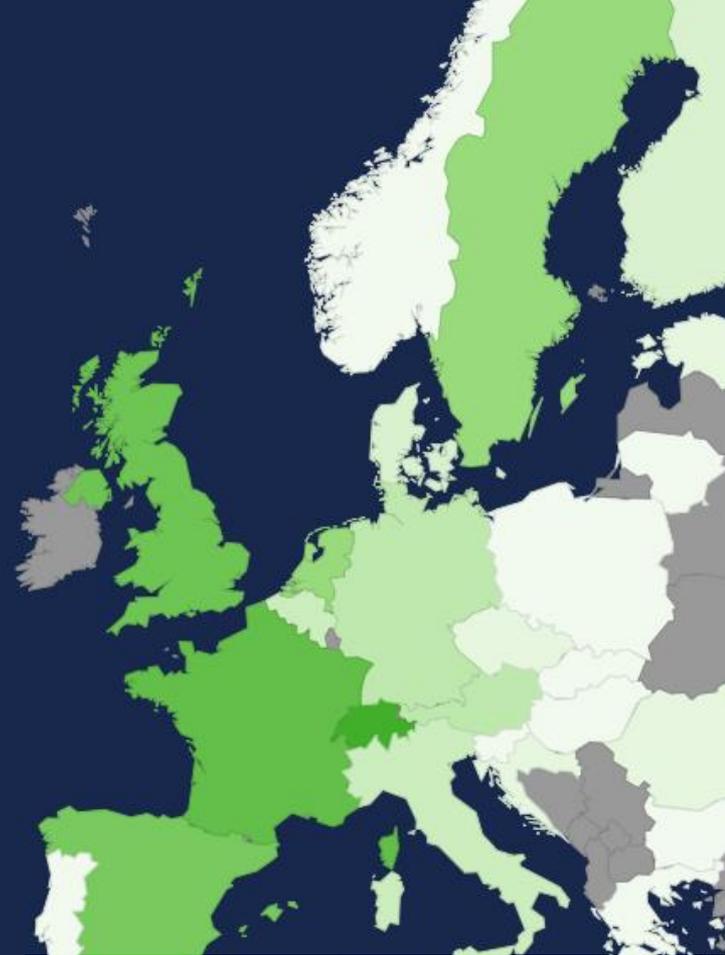
Fintech increasingly recognised as a powerful lever



Exponential growth

Mapping of sustainable fintech applications in Europe

Switzerland	16	Malta	2
France	13	Romania	2
United Kingdom	12	Bulgaria	1
Spain	11	Cyprus	1
The Netherlands	8	Greece	1
Sweden	8	Hungary	1
Austria	5	Iceland	1
Germany	5	Lithuania	1
Belgium	4	Norway	1
Italy	4	Poland	1
Denmark	3	Portugal	1
Finland	3	Slovakia	1
Croatia	2	Slovenia	1
Czech Republic	2		
Estonia	2		





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Transactions

Assets exchange with payment

Crowdfunding

- Established technologies
- Key source of early stage
- Merging with traditional finance

"You no longer need to be a billionaire to be a patron of culture and business. With only five euros you can have an impact."

me
se
naatti
.me



STUDY ON THE FURTHER PROCESSING OF
INSECT FOOD

We are seeking funding for research to industrialize insect processing. Our goal is to develop a process that is not only ecological and ethical, but also inexpensive and efficient. We need funds for research to create the conditions for low-cost production and sales.

STARTED
SEPTEMBER 4, 2017
ENDS ON 30.11.2019

Digital impact investment

- Transparency
- Low cost
- Accessibility
- Tailormade investments

YOVA
Impact Investing



metoa



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Blockchain

Distributed list of records

Tokenization & trading

- Tokenizing sustainable assets
- Immutable trust
- Cost efficient trading
- Consumers become investors
- Initial Coin Offering

"Your investment is backed by real, tangible assets—green energy. Due to smart contracts, it is liquid. You can always see how your investment is doing on the public blockchain."

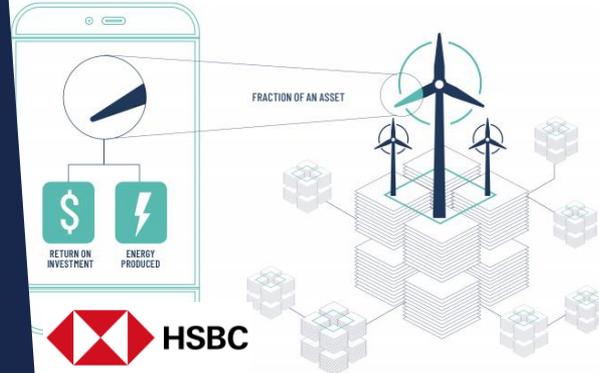
we power



Green Bonds

- Cost-efficient/automated trading
- Fractional asset ownership
- Aggregation of assets
- Asset traceability
- Automated reporting

"For bonds on the blockchain there will be no difference in costs between a 10 dollar and a 10 million-dollar investment."



Aug 2018

Feb 2019

Future



Blockchain Platform for
Green Bonds Validation
and Impact Reporting

greenassetswallet.org

 Stockholm Green Digital Finance

AN INNOVATION PROJECT BY



TECHNOLOGY BY



FUNDED BY



TESTED BY



CO-CREATED WITH





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AI

Intelligence by machines

Machine learning, big data

- Analyzing big data sets
- Preferential analysis
- Quality of the algorithm



arabesque



INNORBIS



Sustainability reporting

- Automated processes
- Cost efficient



normative





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IoT

Automated data transfers

Monitoring, reporting and verification

- Automated processes
- Cost efficient
- Real time enabled
- Transparency
- Monitoring single sources





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Big data

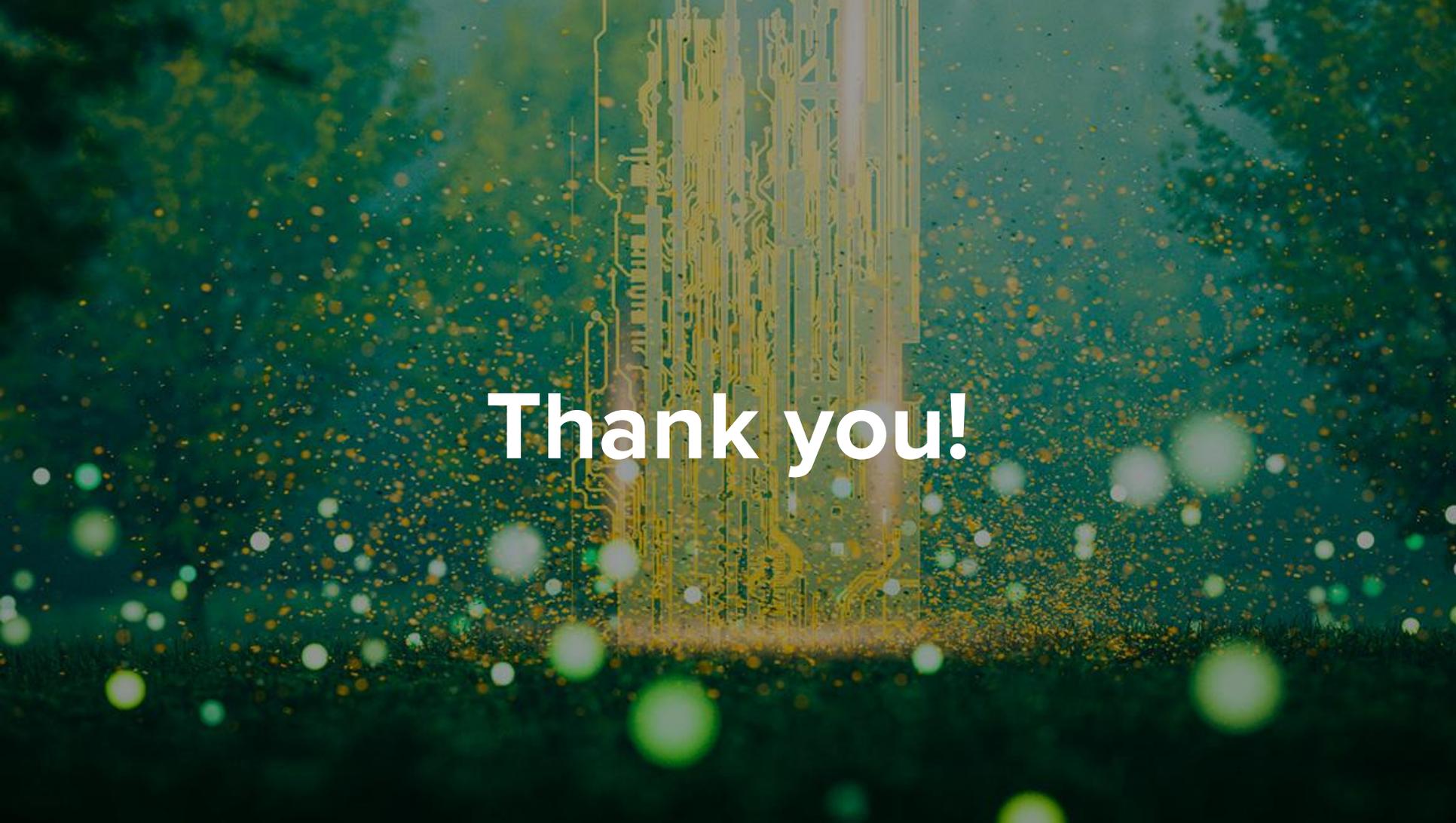
Handling large data sets

Insuretech

- Insure the previously uninsurable
- Automated validation
- Increase resilience

“Push the boundaries of insurance through data science and technology”





Thank you!

Christian Hyldahl, BlackRock:

Climate Risk is Investment Risk

“In the near future – and sooner than most anticipate – there will be a significant reallocation of capital. Companies, investors, and government must prepare and adjust to this with the tools they have”.

In his key note speech at the CBS conference “A Green and Sustainable Financial Sector”, Christian Hyldahl, Head of BlackRock in the Nordics, quoted from the yearly letter to CEOs from Larry Fink – CEO of BlackRock – making it clear that climate risk represents a substantial investment risk.

The magnitude of the ambition to reach the Paris agreement is immense. And the challenge of the energy transition is more complex, larger and urgent than what have been experienced before. The energy demand will rise due to population growth and GDP growth. And while energy efficiency is expected to double compared to current levels, the global energy demand is now forecasted to rise 24% by 2040, said Hyldahl.

He pointed to the recent letters by Larry Fink to clients and CEO’s. Larry Fink argues that climate change present risks that will transform investing dramatically shifting drivers of global economic growth. As assets and risk are repriced a significant reallocation of capital will take place. Fink points out that integrating sustainability into investment processes will drive better risk-adjusted returns. And BlackRock expects all companies to disclose and manage sustainability risk and will hold management responsible in doing so.

Turning to the toolbox, Hyldahl addressed the dilemmas and challenges facing the financial community on sustainability today – and how asset managers, asset owners and lenders have different tools at their disposal. From eliminating certain exposures to aligning capital with specific positive outcomes (Impact Products), there is a broad spectrum of ways to incorporate sustainable investing into a portfolio.

Asset managers offering active products may opt for divestments/exits but this is a two-edged sword, because you lose influence, said Hyldahl who pointed to engagement as another route. BlackRock’s investment stewardship 2019 engagement priorities were governance, corporate strategy, compensation that promotes long-termism, environmental risks and opportunities and human capital (incl diversity). In 2018-2019 the BlackRock stewardship team had in total 2,050 engagements with 1,458 companies in 42 markets.

On the other end of the investment spectrum, you find index investment products, offerings like iShares ETF’s that track various MSCI indices. An increasing number of ETF’s are ESG screened or have ESG factors incorporated but it will always be for the individual investor to decide if ESG factors are a priority. “We have committed to launch 150 new sustainable index products and recommend the ESG funds but cannot decide on behalf of our clients”, said Hyldahl.

Hyldahl concluded his speech by saying that analyzing data is a very important first step for investors that want to address sustainability risks, and a more widespread and standardized common model is needed. BlackRock asks companies to report in line with industry-specific guidelines set by the Sustainability Accounting Standards Board (SASB) and disclose climate related risks in line with the recommendations of the Taskforce on Climate related Financial Disclosures (TCFD). BlackRock will use this information and its engagements to assess if companies have a clear view of these risks and are adequately planning for the future.

For more information about BlackRock, please visit www.blackrock.dk

Sparinvest

ESG: Looking Beyond the Numbers

CBS – A Green and Sustainable Finance Sector

January 2020

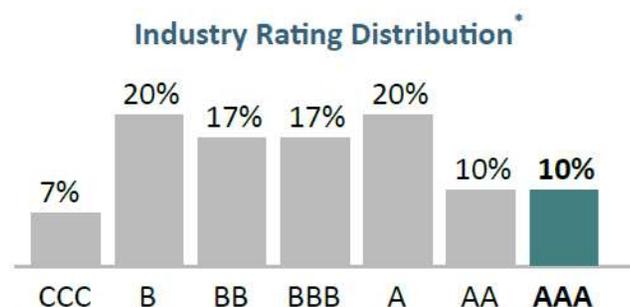


Responsible investors love jargon

Responsible Investment Best-in-class Nordic Swan Proxy advisors
 Impact Corporate Governance Code Stewardship Exclusions vs Screenings
 ESG UN PRI Dark green, light green, or greenwashed? Law, soft law, and comply or explain
 Sustainable Development Goals (SDGs) Dansif Active Ownership Luxflag
 Fiduciary duty Stewardship Codes
 ICGN Carbon footprints Voting Morningstar Sustainability Ratings
 Engagement Montreal Carbon Pledge
 Controversial Weapons TCFD Eurosif Rep risk
 HLEG ESG Research Providers Investeringsfondsbranchen (IFB):
 Brancheanbefaling om ansvarlige investeringer Art 173

The allure of quantitative simplicity: ratings

■ Company Ratings



■ Fund Ratings



Limitations of ratings

- Any rating is inherently a subjective interpretation of underlying data
- Subjectivity can be mitigated by:
 - Standardisation of principles (e.g. GAAP)
 - Auditing
 - Longer history
 - Diversification of providers
- ESG data remains an emerging area:
 - Early stages of standardisation
 - May not be audited
 - Shorter history of data
 - Tendency to trust one provider?

Ratings can be deceptive

PROCESS BASED



- Asset managers rated from A+ to E (absolute)
- In-depth analysis of responsible investing approach: policies, ESG integration, active ownership
- Examples of engagements, ESG integration
- Arguably more focused on quantity than quality in some areas
- Disregards the actual holdings in the portfolios

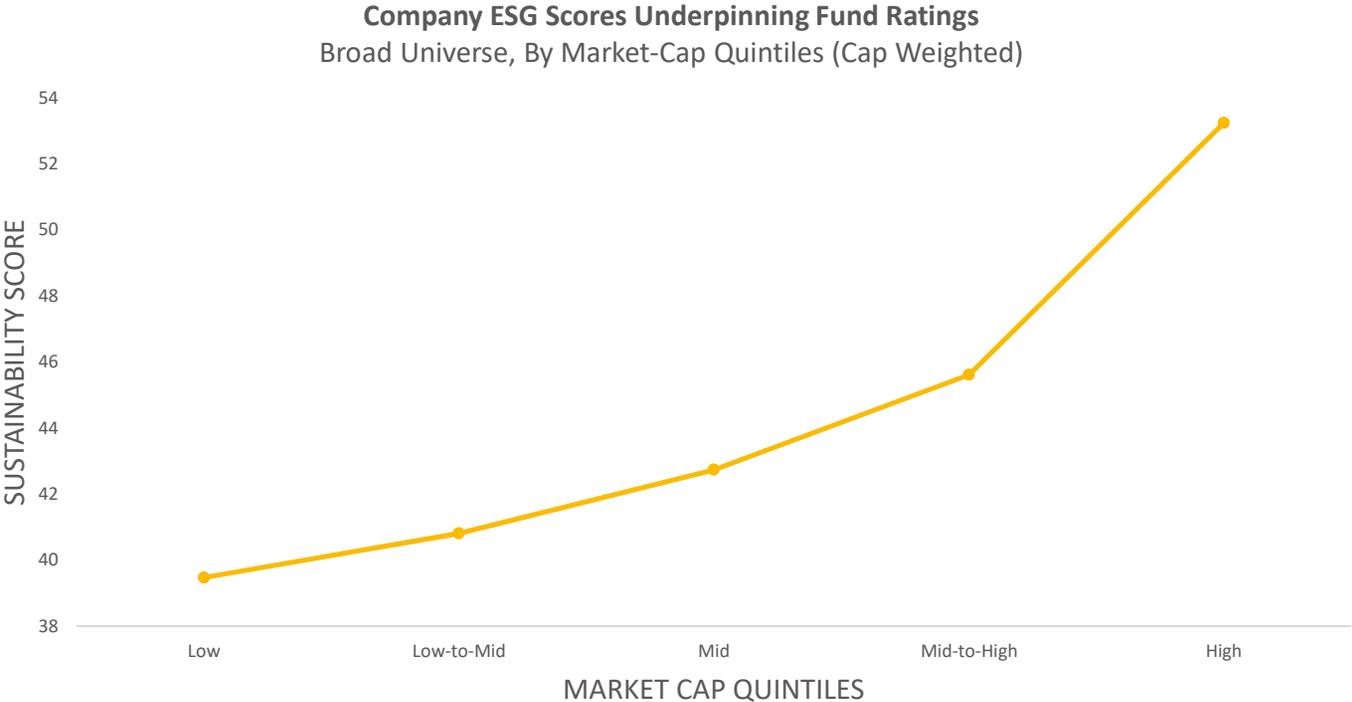
HOLDINGS BASED



- Funds rated from 1-5 globes (relative to Morningstar Category Peers)
- Based on ESG scores of holdings: policies & disclosures, adjusted for controversies
- Disregards quality of asset manager's RI efforts
- Best-in-Class assessment
- Do ESG scores accurately reflect ESG risk and opportunity?
- Risk of bias towards larger companies?



Size Bias in ESG Scores?



Is best-in-class really best?

- Assuming ESG ratings correctly identify the ‘most sustainable’ companies...

- Does only investing in the best necessarily serve investor’s aims?
 - Society
 - Returns
 - Risk

- Focus on absolute level, or focus on delta?

Carbon Footprinting

- Various methodologies
 - Scope 1, 2 – and 3?
 - Simple measure of emissions, or intensity?
 - Scenario testing: 2°C compliant?

- Simple carbon footprint is often used:
 - CO2 emitted per \$1mil invested
 - Useful to inform carbon offsetting
 - Appears a simple way to compare investments

Two Auto Companies

	Sales Mil EUR	Net Inc Mil EUR	Output Vehicles	Emissions Tonnes CO2	Intensity Tonnes CO2/Vehicle
Company A	60.000	3.500	3.800.000	1.220.000	0,3
Company B	60.000	3.500	3.800.000	1.220.000	0,3

Two Auto Companies

	Sales Mil EUR	Net Inc Mil EUR	Output Vehicles	Emissions Tonnes CO2	Intensity Tonnes CO2/Vehicle	Market Cap Bn EUR	Price / Sales	Price / Earnings
Company A	60.000	3.500	3.800.000	1.220.000	0,3	24	0,4x	6,9x
Company B	60.000	3.500	3.800.000	1.220.000	0,3	12	0,2x	3,4x

Two Auto Companies

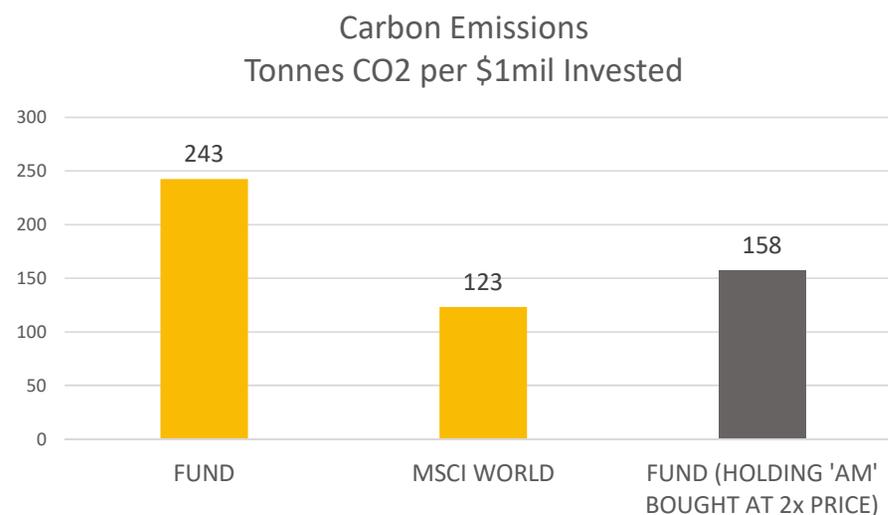
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- Investing EUR 100mil means you own

	Stake	Share of Sales	Share of earnings	Share of Output	Share of Emissions
Company A	0,4%	250mil	15mil	15.833	5.083
Company B	0,8%	500mil	29mil	31.667	10.167

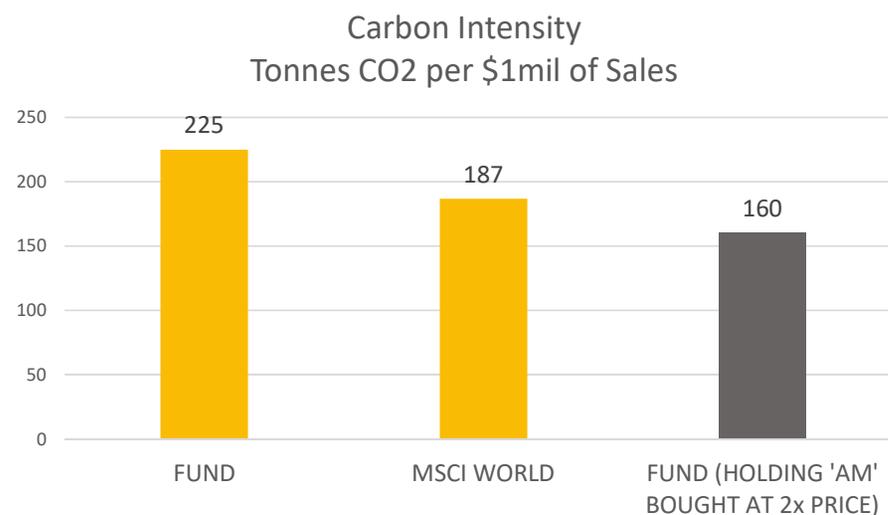
Simple Carbon Footprint: Skewed

- Tonnes CO2 per \$1mil invested
- Simple but misleading
 - Style bias: buying cheaper stocks gets you more of everything – including CO2
 - Ignores efficiency
 - Easily skewed by one holding



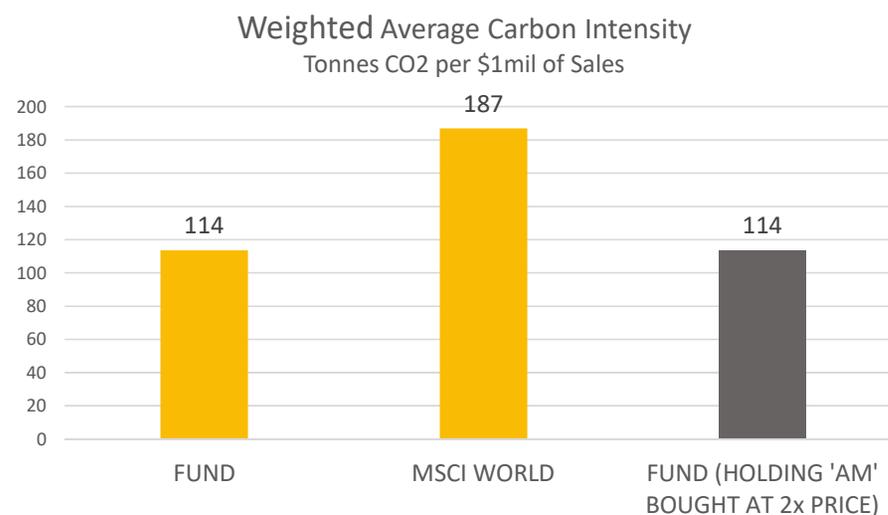
Carbon Intensity: Skewed

- Considers efficiency: CO2 relative to economic output
- Tons CO2 per \$mil of sales
- But:
 - Based on 'owned emissions' & 'owned sales'. Still skewed by security valuations: style bias remains
 - Easily skewed by one holding



Weighted Average Carbon Intensity: Better

- Calculates intensity at each holding – then weighted average
- Tons CO2 per \$mil of sales
- So:
 - Valuations no longer skew result
 - But can still be skewed by one outlying holding



So...?

- Data is necessary – but beware the risks
 - Push for greater disclosure from listed companies: first disclose, then manage
 - Greater disclosure leads to greater standardisation and comparability
 - Avoid simple interpretations and reliance on single measures
 - Consider whether best-in-class delivers your needs

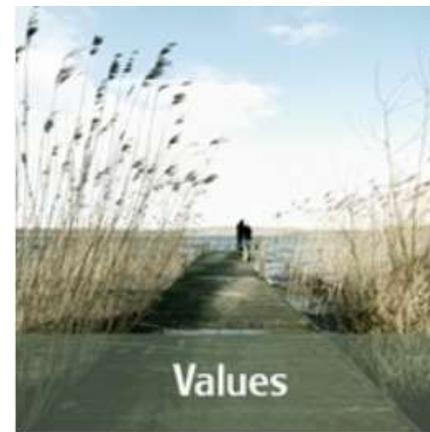
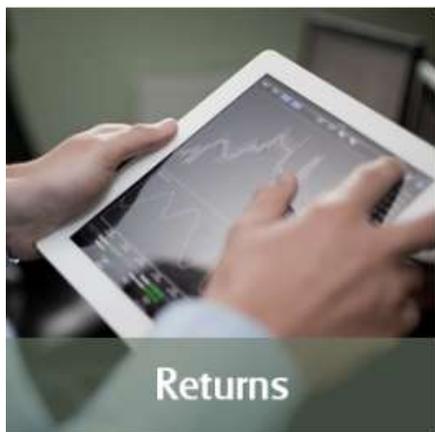
- Consider more qualitative approach

Qualitative approach

- Identify: ESG opportunities & risks
- Assess: materiality & company response
- Model: adjust estimates
- Engage: seek improvement



Why do we invest responsibly?



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Sustainable banking

Merkur Cooperative Bank

January 23th 2020

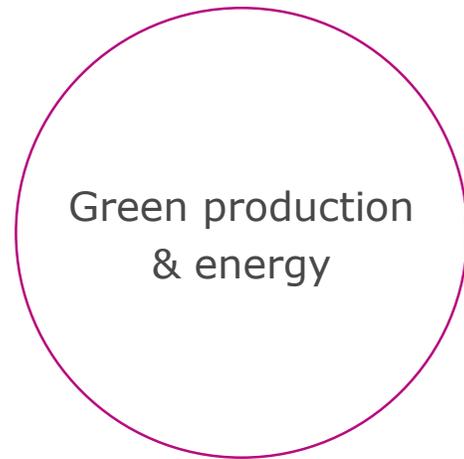


Merkur Cooperative Bank

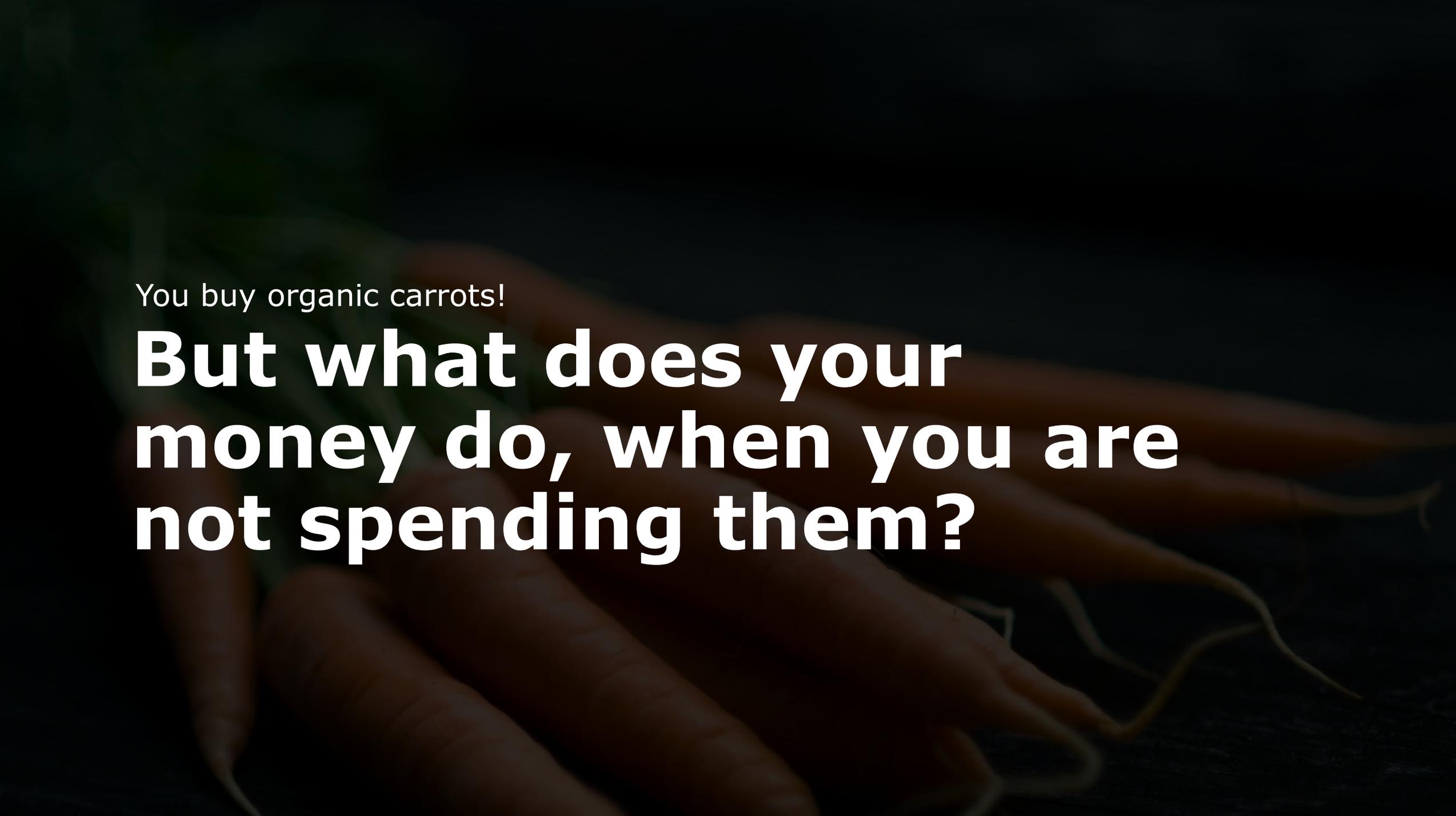
- Classical banking combined with strong values and a consistent view on which development we want to see in society
- Founded in 1982
- Owned by our customers
- 3 branches in Denmark's largest cities
- Over 34,000 customers
- 7,000+ shareholders
- Total assets 3.5 billion DKK + 1.3 billion DKK in investment accounts



Our purpose



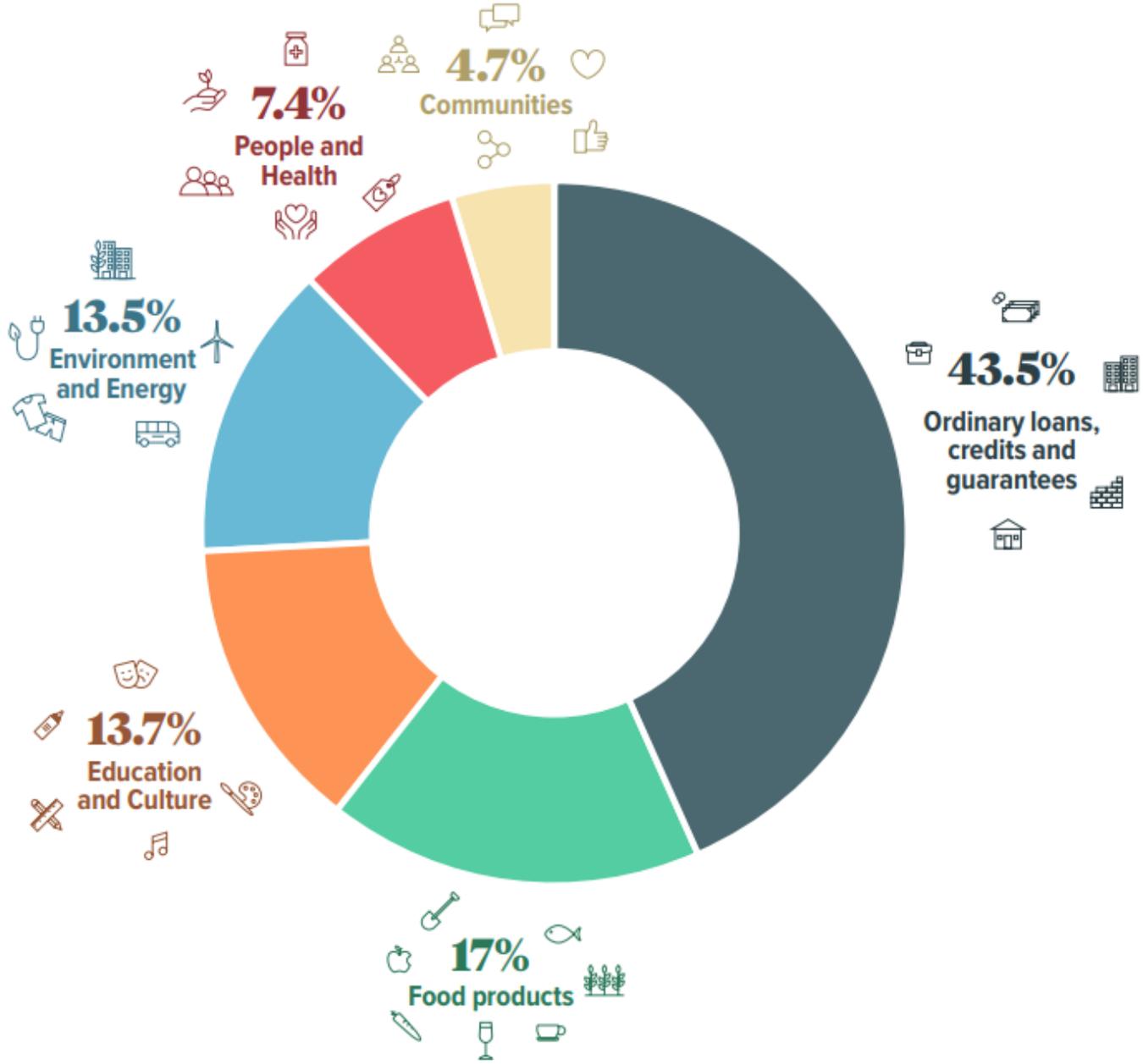
Money does not do anything by itself. They are a tool. In Merkur we want to use that tool to promote a sustainable transition of our society.

A close-up photograph of a hand holding a carrot. The hand is positioned in the center, with fingers wrapped around the carrot. The carrot is orange and has some green leafy tops. The background is dark and out of focus. The overall lighting is soft, highlighting the texture of the skin and the carrot.

You buy organic carrots!

**But what does your
money do, when you are
not spending them?**

Loans with impact



Investments



Traditional investments

(execution only)



Responsible investments

M e r k u r



Sustainable investments

p r o v i d e s



Impact first investments

a d v i s i n g



Traditional philanthropy



FOCUS ON IMPACT



The Nordic Swan Ecolabel



- First four SRI funds on Danish market to receive the Nordic Swan Ecolabel
- Official environment label
- Helps create minimum standards for sustainability

Impact first investments



- Renewable energy

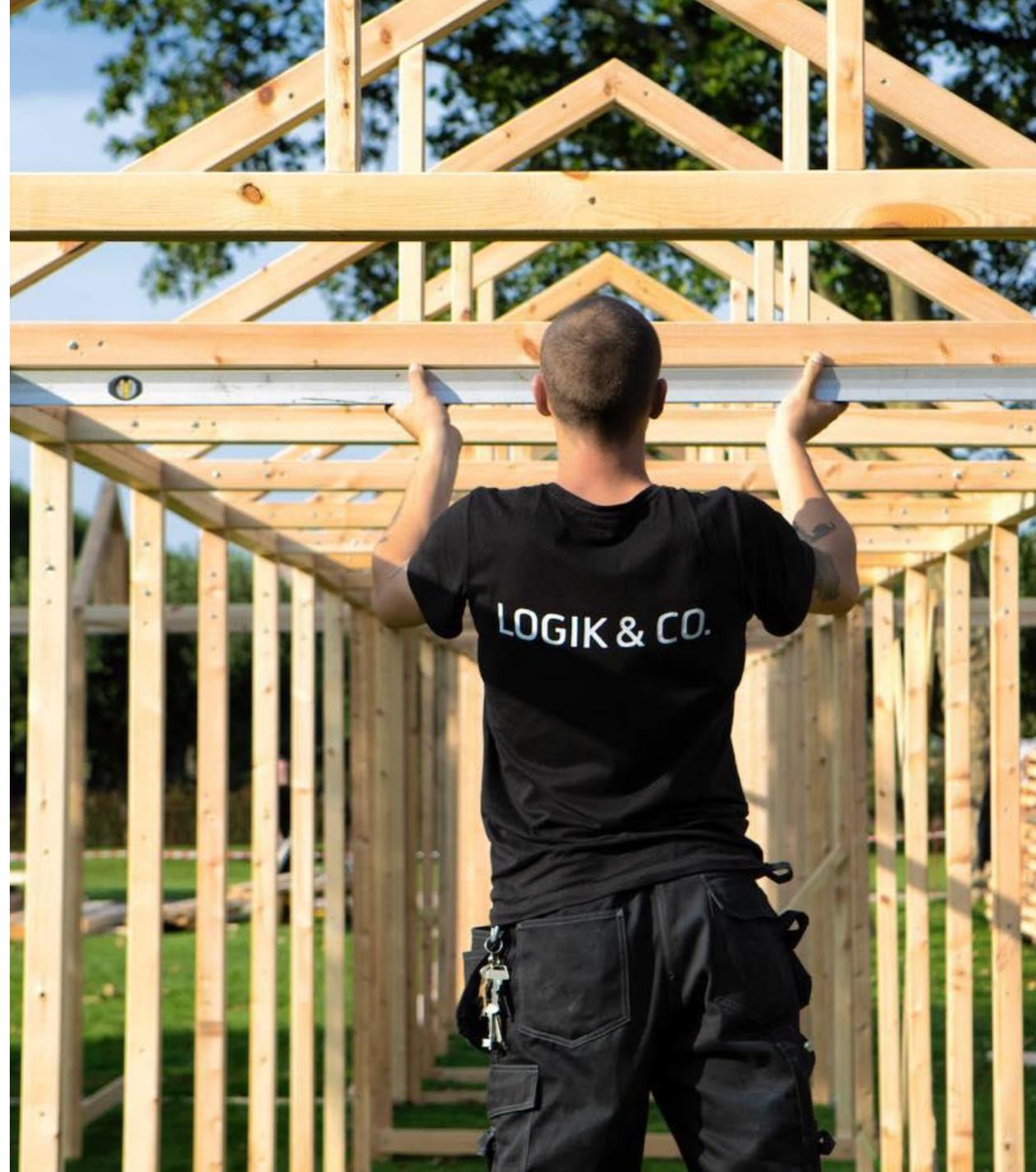
- Microfinance

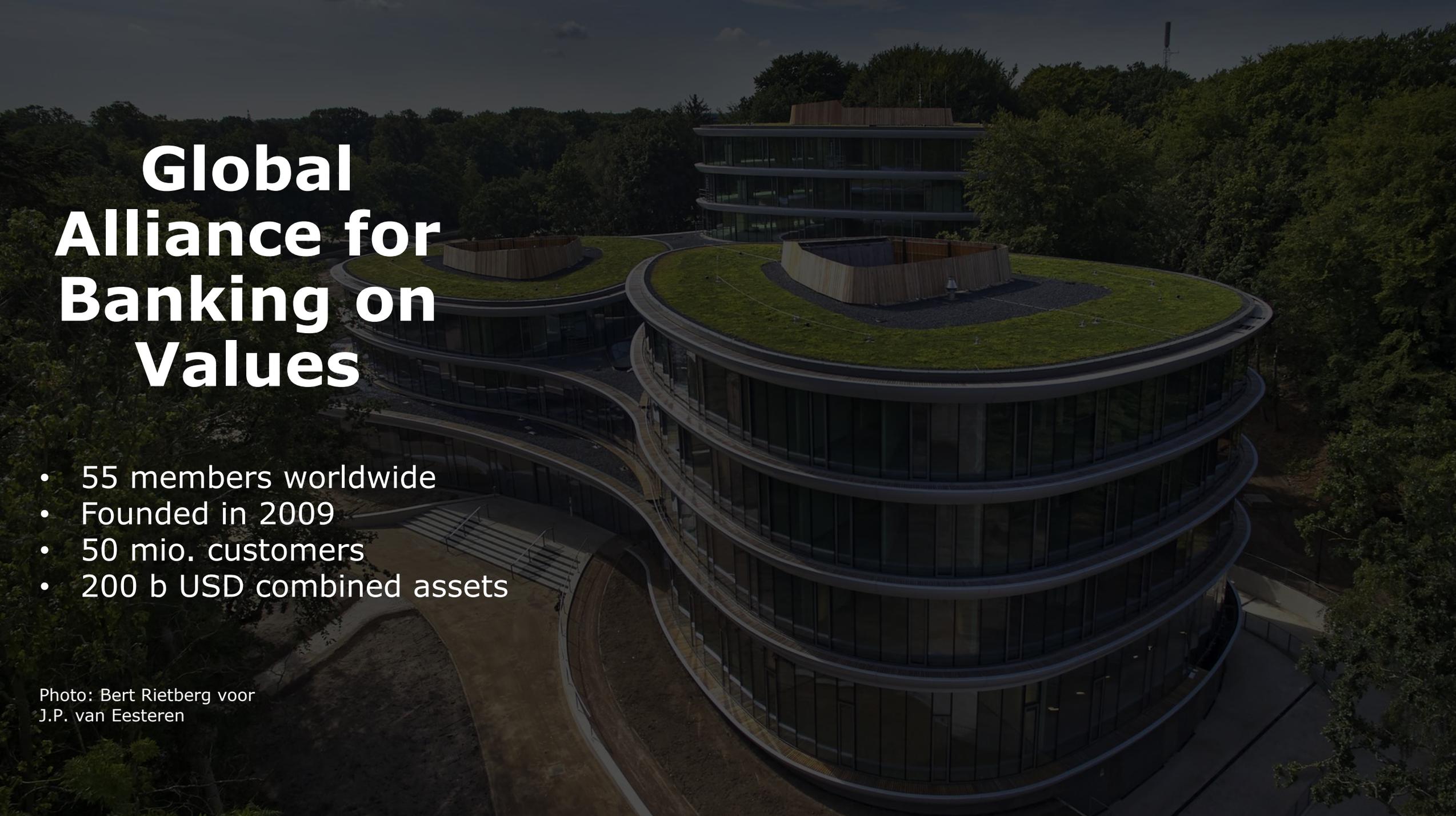
- Merkur shares

Transparency

We emphasize the transparency of our banking business and therefore we publish all business loans on the website:

merkur.dk/her-arbejder-dine-penge





Global Alliance for Banking on Values

- 55 members worldwide
- Founded in 2009
- 50 mio. customers
- 200 b USD combined assets

Photo: Bert Rietberg voor
J.P. van Eesteren

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www.merkur.dk
www.gabv.org