

10th International Degrowth Conference
Pontevedra, Spain
19 June 2024

Investing in **Degrowth**

Session Summary, Slides and Transcript

About This Document

This is a documentation of the session '[*Investing in degrowth: resourcing postgrowth futures*](#)' held at the joint 10th Intl. Degrowth Conference and 15th Conference of the European Society of Ecological Economics in Pontevedra, Spain, on June 19th, 2024.

Included are summaries of the panellists' presentations, with their slides and a transcript, lightly edited for clarity, and an audience Q&A segment transcript. Additionally, a briefing paper titled '[*Degrowth-Aligned Finance: A Preliminary Exploration*](#)' was prepared prior to the conference.

This document is online at <https://heliocene.org/2024/09/06/investing-in-degrowth-session-summary/>

The field of degrowth and post-growth finance is in its nascent stages, with ongoing research and emerging practices. The intention of the conference session was to draw attention to this emerging field. If you are interested in conversing with others on this topic, you are invited to join the Telegram channel that was initiated at the conference session (see QR code link below).

Telegram Channel



Executive Summary

Co-hosts [*Anastasia V. Linn*](#) (AVL) of Degrowth Switzerland and [*Jennifer Wilkins*](#) (JW) of Heliocene explain the need to shift from the traditional growth-based financial system to one that supports a post-growth economy. Three levels of finance are discussed, each by an expert.

Macro Level: [*Anja Janischewski*](#) (AJ), PhD candidate at Chemnitz University of Technology, discusses systemic risk. Transitioning to a post-growth economy will likely reduce CO₂ emissions and material throughput, affecting GDP growth and devaluing fossil fuel-related assets. A shift to negative growth rates will likely lower stock values, although non-growth stocks might retain some value. It is an open question whether current financial systems are dependent on long-term GDP growth. Degrowth could present systemic risks similar to those seen during the 2008 financial crisis.

Meso Level: [*Hans Stegeman*](#) (HS), Chief Economist at Triodos Bank, talks about implementing post-growth finance in banks. Altering institutional structures like money creation could support degrowth, but the connection between finance and the real economy is not straightforward, and aligning finance with ecological limits is a challenge. Current academic and practical knowledge explains potential for change within specific parts of the financial system; however, understanding linkages within the whole financial system is crucial. Better impact management tools, advocating for policy changes and normalising new practices can contribute to a future-fit economy.

Micro Level: [*Alex Lopez*](#) (AL), board member at Ekhilur Cooperative, explores practical applications of degrowth-aligned money and local payment systems for social development. Ekhilur's experimental payment system, regulated by the Bank of Spain, aims to promote degrowth by incorporating features like exit costs, demurrage and a loyalty system into local economies. Early results in one town show increased local purchases and changes in consumption habits. Future plans involve integrating with IBAN, engaging more retailers and establishing a local financial system. The long-term vision includes expanding to other towns and to regional level, funding beneficial local activities and exploring negative interest credits.

Detailed Summary

Macro Level Summary

Anja discusses the systemic impacts of transitioning to a post-growth financial system, highlighting the systemic risks that could arise during this transition.

- **Transition and Steady-State Scenarios:** A degrowth transition involves a rapid decline in CO₂ emissions, material throughput and – as a likely side effect – a decline in GDP, leading to a steady state economy with sustainable practices and minimal GDP growth. This impacts financial markets by devaluing assets linked to fossil fuel-based production (stranded assets), among other things.
- **Impact on Financial Markets:** The Gordon growth model is used to illustrate how a shift from positive to negative growth rates would decrease stock values, yet non-growth stocks would retain some value. The complexity of actual stock evaluations beyond this simplified model is emphasised.
- **Growth Dependence:** It is questioned whether current financial systems are dependent on long-term positive GDP growth for their functioning. A definition of growth dependence leads to considering functions like payment systems, credit provision and financial resource allocation.
- **Systemic Risk:** The potential for systemic risk during the transition to a zero-growth economy is a major concern as it could lead to widespread financial instability, similar to the 2008 financial crisis. The question remains whether a zero-growth version of the current financial system could be resilient or if significant changes are necessary.

Meso Level Summary

Hans discusses how Triodos Bank aims to finance a post-growth economy, from a systemic perspective.

- **No Simple Connection Between Finance and Real Economy:** Sustainable finance does not automatically impact the real economy. As of now, there is also no clear way to ensure finance aligns with ecological boundaries.
- **Growth Dependence:** Some believe growth dependence is caused by money creation. But by altering institutional structures, like money creation and interest systems, finance could support degrowth.
- **Interlinkages in the System:** For a financial system to support a degrowth economy, all interconnections within the system must be considered. This includes changes in the real economy, financial institutions and financial structures.
- **Macro-Level Boundaries:** Setting macro-level boundaries, like restricting money creation within ecological limits, is challenging but necessary. Translating ecological boundaries into monetary terms and then into money creation policies is complex.
- **Triodos Bank focuses on three areas:** 1) Phasing out unsustainable activities (e.g. no financing for fossil fuels or fast fashion); 2) Advocating for policies to phase out harmful industries; 3) Empowering and scaling up transformative initiatives through financing.
- **Sustainable Finance Evolution:** Triodos Bank's approach has evolved from ethical exclusions and ESG best-in-class strategies to an impact-first model, and now to transformative impact, focusing on the future benefits of their financing activities.
- **Post-Growth Strategy:** Triodos Bank advocates for radical change and fundamental shifts in areas like agriculture and finance. They recently organised a post-growth festival to engage clients and promote a different approach to finance that aligns with a sustainable future.

Micro Level Summary

Alex discusses experimenting with a new payment platform and type of money which seeks to help create an economic paradigm where degrowth makes economic sense.

- **Experimentation with New Money:** The existing system favours growth-oriented activities, often undervaluing degrowth initiatives despite their potential benefits. The Ekhilur Cooperative initiative tests a novel type of money to help foster a paradigm in which degrowth-oriented activities are part of common sense.
- **Redefining Money:** Money is viewed as a social construct that can be modified. The Ekhilur payment system, regulated by the Bank of Spain, incorporates features like demurrage, exit costs and a loyalty system, making it programmable and independent of traditional payment networks like Visa.
- **Loyalty System:** The system incentivises use, boosting local commerce, creating a network with desired characteristics.
- **Positive Results in the town of Hernani:** A May 2024 survey showed that 39% of respondents increased local purchases using Ekhilur. The first five months of 2024 saw 50,000 sales transactions in a town of 20,000 residents, indicating successful adoption and new consumer habits.
- **Future Steps:** Plans include integrating with IBAN, engaging more retailers and establishing a local 'financial circuit'. The goal is to create a micro-economic system and bottom-up development, starting locally and expanding regionally.
- **Long-term Vision:** The longer aim is to validate the degrowth paradigm, fund local activities (especially food production and processing) and explore negative interest credits.

Q&A - Summary

- **Q1: Big funds may fear losing power if they invest in degrowth initiatives because such investments could shrink their size. Is this fear preventing a shift in investment paradigms?**
A1: Yes, the financial system's structure and power dynamics are resistant to change. Asset managers have significant influence and may resist degrowth-aligned investments that could reduce their power.
- **Q2: In a degrowth finance paradigm, is there a need for new software tools for risk management and investment allocation, similar to those used by the big finance companies today?**
A2: Yes, there is a need for new tools. While existing systems focus on financial risk, new tools should integrate impact management capabilities that make it easier to strive for 'more good' rather than just 'less bad'. While it is reductionist, using more data to this end is likely to be a helpful transitional measure.
- **Q3: How can ROI be redefined to align with impact investing, especially when current expectations often lead to exploitative practices?**
A3: There's a need for impact-adjusted returns, which would consider both financial and non-financial outcomes, including environmental and social impacts. This shift requires new data and regulations.
- **Q4: Should we continue to discount the future when considering economic values and investments?**
A4: Discount rates are standard for financial evaluations since assets depreciate, but for negative impacts, where value is extracted, they do not make sense. A negative discount rate could be more suitable.
- **Q5: What kind of degrowth economy is envisioned, especially regarding sustainable enterprises and profitability?**
A5: There is a vision for a more sustainable economy with carbon and circularity goals. However, practical steps and incremental changes are vital. We need new business models with regulatory support. Data on companies' contributions to social and ecological goals is likewise important, and being worked on. Additionally, macro-level public regulation and financial flows are needed to guide investments towards sustainability and manage externalities effectively.

Session

Introduction



10th International Degrowth Conference and
15th Conference of the European Society for Ecological Economics

Investing in Degrowth

Anastasia Linn & Jennifer Wilkins

19 June 2024: 09:00 - 10:30

CSS125: Investing in degrowth: resourcing postgrowth futures

Pontevedra, 18-21 June 2024

AVL: We're super happy that you're here and interested in this emerging topic of post-growth finance. We're going to give a couple of inputs and hear perspectives from three wonderful speakers that could give us hints of what a post-growth finance system could look like, at least some first early signs.

Co-chairs

Anastasia Linn:

Degrowth Switzerland / University of Zurich

Jennifer Wilkins:

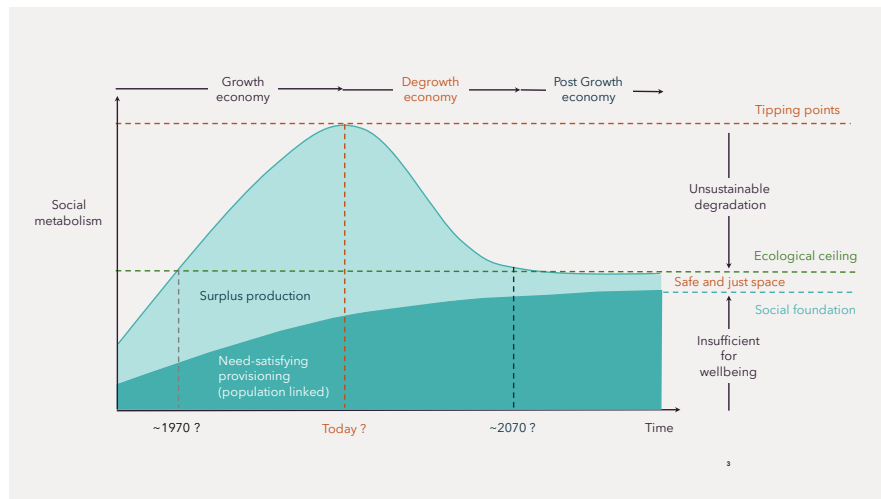
Heliocene.org / Universitat Autònoma de Barcelona

Pontevedra, 18-21 June 2024

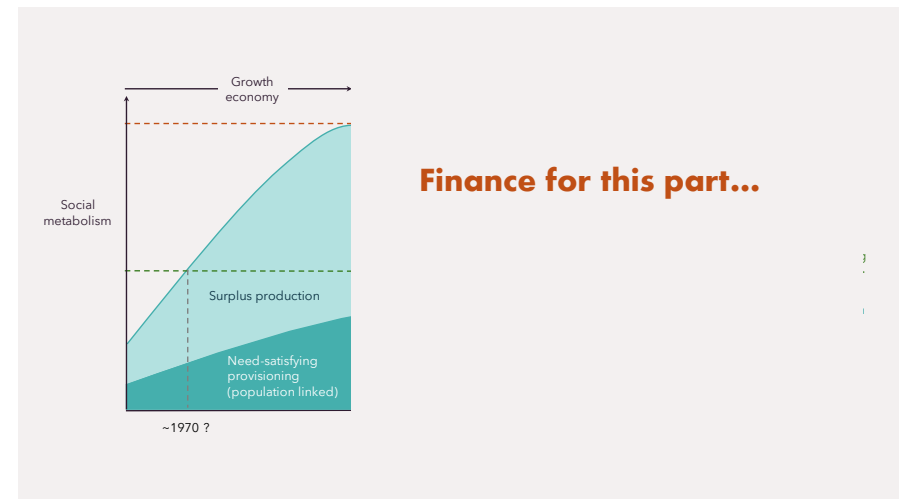
AVL: My name is Anastasia. I'm with Degrowth Switzerland and I'm associated with the University of Zurich. And Jennifer, you have just finished the Master's in degrowth.

JW: Yes, I have just finished the Master's in degrowth at the Autonomous University of Barcelona and I have a post-growth consulting organisation called Heliocene.

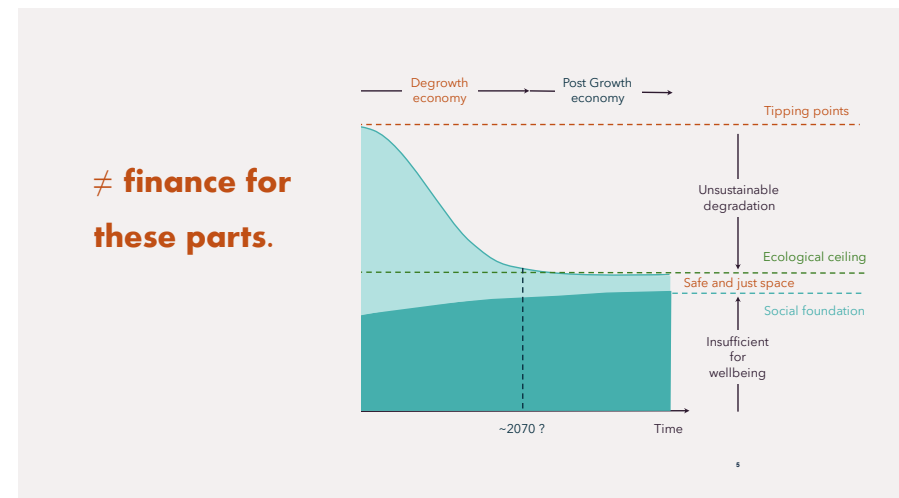
AVL: We've been working over the last few months on putting together some of the disparate points related to post-growth finance, whether they're using degrowth language or not, and we're going to give a very quick introduction.



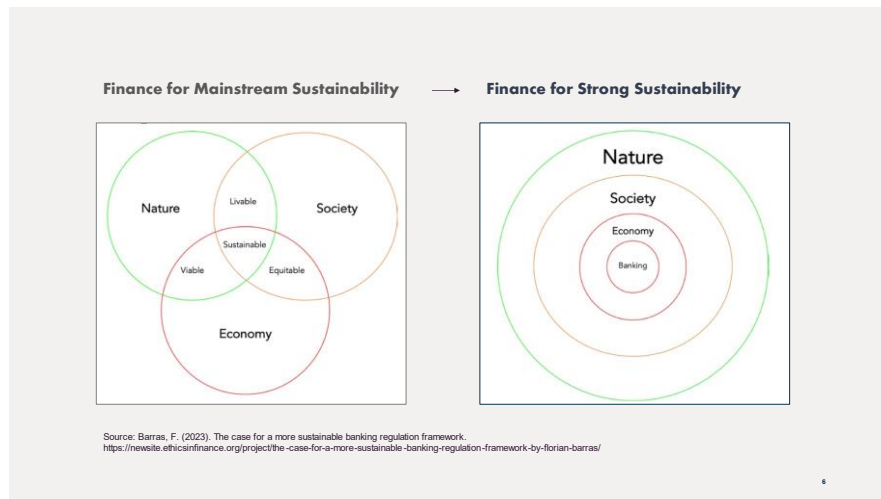
AVL: This is a model that we're all pretty familiar with, we won't spend very much time on it, but basically we are now in the upward part of reaching tipping points. And the important thing from a finance perspective is that...



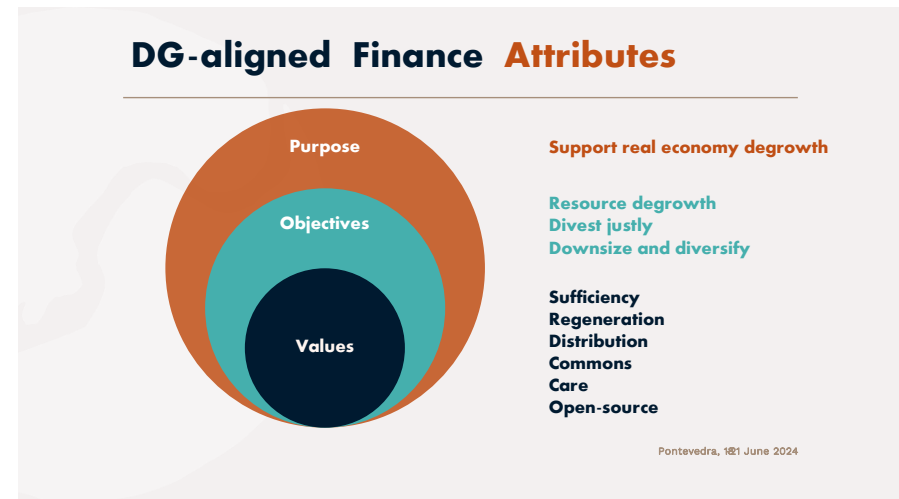
... the financial tools and systems we've been using for the growth part of this three-part model...



... are probably not what we will need in the second and third parts, for degrowth and post-growth.



AVL: We would need to move from sustainability-as-normal, including so-called ‘sustainable investing’ in the financial system today, where nature, society and economy are seen as almost interchangeable or equally valuable, to a financial system that recognizes the economy as embedded within society and nature.



AVL: These are some of our first reflections, explained in our pre-conference [briefing paper](#).

We think that a degrowth financial system would need to support real economy degrowth, first and foremost.

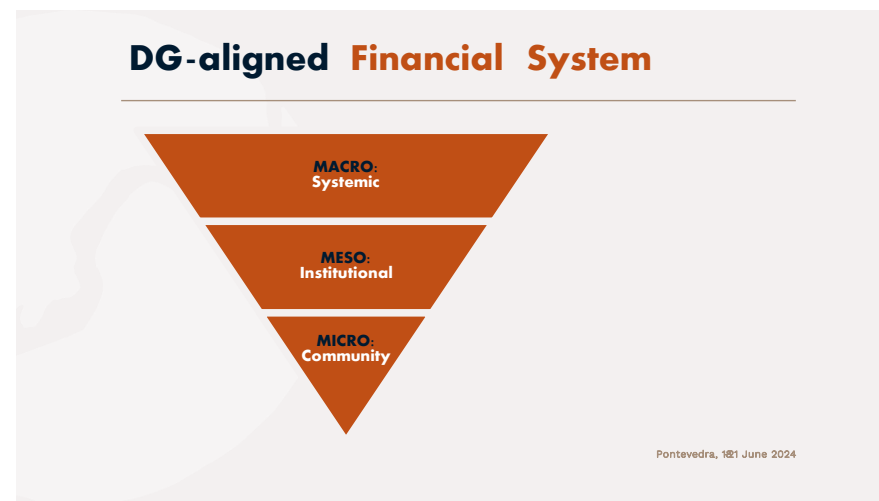
It would resource degrowth projects – things that we think that we need from a degrowth perspective. It would divest justly from industries that we want to shrink. And it would downsize and diversify wealth, moving wealth from its highly concentrated state today to a more distributed state.

And we’ve put together some first values. These are including, but are not limited to, ideas like sufficiency, regeneration, distribution, commoning, care and open source. As you can imagine, these values are not well reflected in the financial system today.

Current Financial System	Degrowth-aligned Financial System		
Asset pricing theory; Arbitrage pricing theory; Risk management theory; Real options pricing; Corporate finance theory; Efficient market hypothesis; Market microstructure theory; Portfolio theory; Shareholder primacy; Stakeholder theory; Sustainable finance theories	Monetary growth imperative; Modern monetary theory; Commons based finance theory; Solidarity finance theory; Indigenous finance theory; Democratic finance theory; Socially just finance theory; Transformative impact	→ ?	Theories
Fractional reserve banking; Private equity; Venture capital; IPOs; Systemic/systems change investing; Compound interest; National currency; International currency reserve; Digital payments; Cryptocurrency; Sustainable finance; Impact investing; Regenerative finance; Blended finance; Microfinance; Microlending	Alternative currencies; Community wealth building; Crowdfunding; Peer-to-peer lending; Non-extractive finance; Islamic finance; Progressive philanthropy; Pooled philanthropy; Social justice philanthropy; Trust-based philanthropy; Community investments; Polycapital understandings of wealth; Patient capital; Non-monetary exchange; Negative interest	→ ?	Approaches
The World Bank, The IMF; Governments; Central banks; Retail banks; Investment banks; Private banks; Hedge Funds; Insurance firms; Pensions funds; Real estate firms; Exchange and clearing houses; Ratings agencies; Foundations; Ethical banks	Community banks; Public investment banks; Community development financial institutions; Cooperative finance and credit unions; Social enterprise; Not-for-profit enterprise; Alternative ownership enterprises; Giving circles	→ ?	Actors

AVL: We're starting to see some bits and pieces from different parts of the financial system, but also the economy more broadly, that could give us hints of what the post-growth and degrowth-aligned financial systems could look like.

I'm not going to go through these. If you're interested, you can find them in the [briefing paper](#). They include theories, approaches (or tools) and actors that give potential insights to a degrowth-aligned financial system.



AVL: That brings us to today, and the three levels our presenters are going to be speaking about.

JW: When Anastasia and I were trying to decide how to present today and pitch to panellists, we opted to explore the financial system at macro, meso and micro levels. The macro level is systemic, the meso level is institutional and the micro level is your community.

Speakers



Anja Janischewski :

PhD Candidate, Chemnitz University of Technology



Hans Stegeman:

Chief Economist, Triodos Bank



Alex Lopez:

Board Member, Ekhilur Cooperative

Pontevedra, 18th June 2024

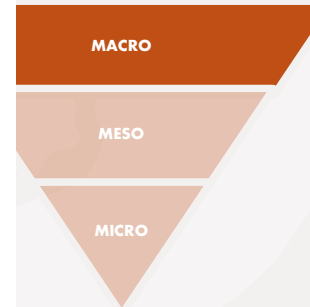
JW: We have three amazing speakers today.

Speaking at the macro level, we have Anja Janischewski, who is a PhD candidate at the Chemnitz University of Technology.

At meso level, we have Hans Stegeman, who is Chief Economist at Triodos Bank.

And at micro level, we have Alex Lopez, who is a board member at Ekhilur Cooperative.

Systemic : **Anja Janischewski**

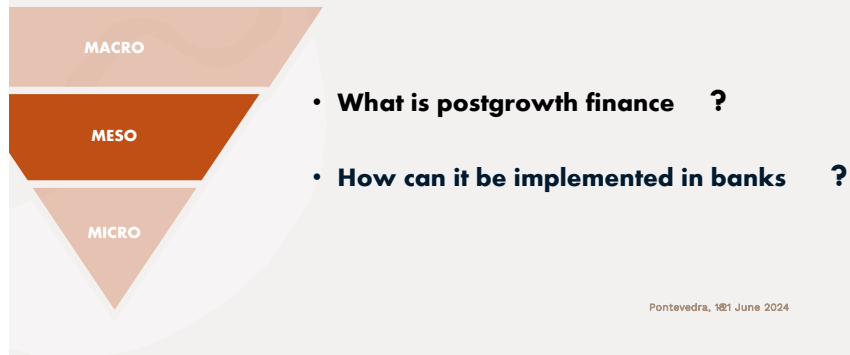


- What is growth dependence ?
- Can finance support degrowth ?

Pontevedra, 18th June 2024

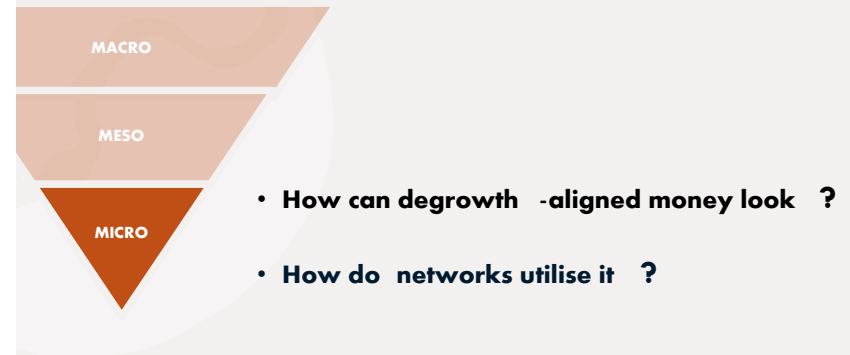
JW: At the macro level, Anja will look at growth dependence and whether finance can support degrowth. To explain a little bit more about Anja's work, she's studying systemic risk and economics and finance, and she has a background in applied mathematics. So this presentation is a look at modelling and theory building.

Institutional : Hans Stegeman



JW: At the meso level, Hans will touch on the question: what is post growth finance and how can it be implemented in banks. Hans is chief economist at Triodos Bank in the Netherlands, an international ethical bank. He's also the group director of impact and economics, and has just finished his PhD. I would describe Hans as an 'insurgent professional', an intrapreneur of degrowth in an institutional space.

Community : Alex Lopez



JW: And at the micro level, Alex will answer the question: what does degrowth-aligned money look like and how do networks utilise it. Alex is a practitioner, he's applying degrowth in reality. Ekhilur Cooperative is a not-for-profit consumer cooperative operating a local payments system contributing to social development in Basque Country. Alex is also a board member of an energy cooperative.

Those are our three panellists. They are each going to give a short presentation and then we'll have some Q&A.

Anja

Janischewski

Concepts for finance under limits to growth

Anja Janischewski
Chemnitz University of Technology

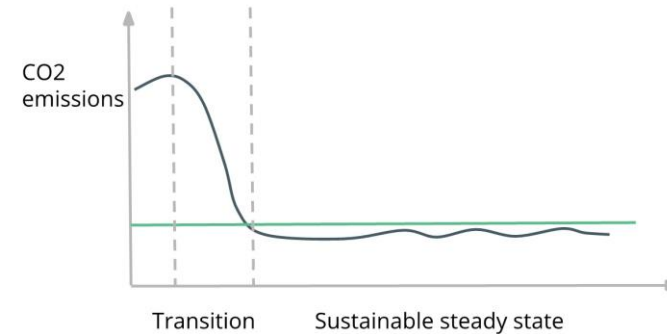
I'm going to talk about a systemic perspective, but a specific lens, taking the perspective of impacts of a possible transition on financial systems.

I think there are a lot of possible interconnections on the macro level, having a look at how financial systems can lead to a post-growth transition, which the next speaker is also going to touch upon.

I'm taking a perspective in the direction of the impact of the transition on the financial system. And then you look at, okay, what risks, what systemic risk, what other phenomenon can arise there.

I'm sharing a few concepts that hopefully will spark interesting discussions.

Rapid transition required to meet climate targets



So the first thing I think we should talk about is what scenario are we interested in.

As already introduced, a post-growth transition is assumed to have a transition phase, where we have a rapid decline of CO₂ emissions and material throughput. But also most likely a decline in GDP as a side effect.

And then a sustainable steady state, with sustainable material throughput, sustainable CO₂ emissions, but then also, most likely as a side effect, not very much GDP growth.

So what would that mean for financial markets as they are designed at the moment?

Transition vs. Steady State



- Stranded assets
- Unrealized growth expectations
- Distributional questions:
Who bears the losses from stranded assets?



- Expectations in line with zero-growth economy
- Stability of zero-growth state?
- Distributional questions:
How does inequality change over time?

Taking these two perspectives [shown in the slide], we can safely assume that a transition where you have a lot of decline or, basically, the decision to no longer use fossil fuel-based production, that you will have a lot of devaluation of the related financial assets, which are then called stranded assets, where the core is essentially unrealized expectations.

A lot of value in financial markets is created by the traders or by the different financial institutions expecting certain financial returns in the future. If those returns are no longer expected, then we have to decrease the estimated value. And then the question is, how do we deal with that? And who is bearing that? How are the losses distributed from that? So that's the transition perspective.

In the steady-state perspective, then we have to ask ourselves, are the expectations actually met? Does everyone then already expect a non-growing economy? Or do people expect growth and then the expectations are not met? And that matters for the impacts on financial systems.

Stock market valuations



- Substantial losses due to unmet expectations of future cash flows

Tokic, D. (2012). The economic and financial dimensions of degrowth. *Ecological Economics*, 84, 49-56.



- Gordon growth model implies on average constant, positive stock share values

So I'd like to briefly go into a common model for stock share valuations, which is very simplified. But I think it illustrates a possible effect.

Stock market valuations: Gordon growth model

$$\text{Intrinsic value} = \frac{\text{Dividend} * (1 + g)}{r - g}$$



- g ... expected growth rate of dividends
- r ... discount rate

→ Zero growth does **not** imply a zero value of stock shares.

The so-called Gordon growth model consists of looking at future expected dividends, including a growth rate. We have the dividends, we have 'g' as the growth rate, and we have also r, a discount rate for how future cash flows are discounted so that we don't value future cash flows the same way we do cash flows at the moment.

And from that model, we can then derive that, if we have suddenly a shift from a positive growth rate to a negative growth rate, then simply from this model we would see that stock shares would decline massively.

But if we have no growth from the start then that model would vary only on how the current dividends are changing. If we do not have growth on average in the long run then also the stock shares would not grow, but neither would they drop to zero. There will still be some positive value. So I think this is a useful concept to keep in mind.

Of course, actual stock share evaluations are much more complex, but I think this is a good starting point for the discussion.

Growth dependence

A socio-economic system is growth-dependent, if it requires long-term positive growth rates with regard to a growth measuring unit (e.g., GDP) in order to maintain all its relevant functions or properties.

→ **relevance of functions or properties according to applied human need framework.**

The next concept I think is useful to think about is growth dependence. Growth dependence is largely discussed in fields like employment and social insurance systems, questioning how the social services of our economy can function without growth.

But we can also use the growth dependence concept to apply to financial systems. How can financial systems be designed to not be growth dependent? But also the question, are current financial systems growth dependent? Do they require positive, long-term GDP growth rates to function in a certain way? Or are some functions growth dependent and others maybe not?

To share a possible lens on this topic, let's use this working definition of growth dependence, that the 'socio-economic system is growth dependent if it requires long term positive growth rates with regard to a growth measuring unit, for example GDP, in order to maintain all its relevant functions or properties'. You have to think about how relevant functions of a system relate to human needs or some other human wellbeing framework.

Growth dependence of financial systems

Which functions?

- Payment system
- Provision of credit
- Allocation of financial resources
- Generation of returns (for investors in general, for pensions funds)
- ...

Properties?

- Stability

If we take that definition, we can think about which functions we need the system to have.

We will later hear about payment systems. Payment systems are a possible function, as are the provision of credit, allocation of financial resources and current generation of returns for investors, in general, and pension funds.

So, what properties are we interested in?

This is basically a list of possible things that one might consider to be functions, and then it's up to debate regarding which functions one chooses to focus on.

We're looking at properties of financial systems and the stability of financial systems, broadly speaking.

Systemic Risk

*Systemic risk is the risk that a shock will result in such a significant materialization of (e.g. macro-financial) imbalances that it will spread on a scale that **impairs the functioning of the financial system** and to the extent that it adversely affects the real economy (e.g. economic growth)*

Smaga, P. (2014). The concept of systemic risk. *Systemic Risk Centre Special Paper*, (5).

Related to stability, we can consider systemic risk, which is the property of financial systems (and other systems) where you have a system-wide impact from one shock that not only impacts one institution but then spreads throughout the system.

An example that you all know about is the 2008 financial crisis, where we had to have large scale government interventions to prevent further system-wide impacts.

And the question is, suppose we have systemic risk in a transition to zero growth, in a transition to a sustainable economy, how would we deal with the effects?

I think these are largely open questions.

Systemic risk in a transition vs. steady state



- Additional challenge to "smooth" transition
- Self-reinforcing effects



- Less growth = less "animal spirits" causing bubbles ?
- Resilient financial system in zero-growth economy required.

So let me go back to the initial distinction of the two concepts of a transition and a steady state.

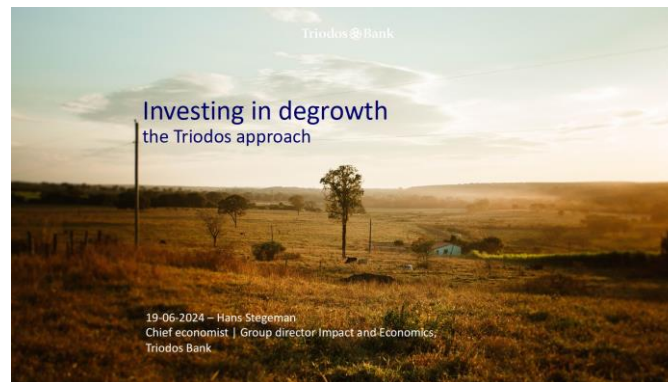
In a transition, systemic risk would be an additional challenge for a smooth transition, with possibly self-reinforcing effects. If you, for example, implement certain policies that limit fossil fuel production and also take into account other environmental boundaries, or basically non-fossil fuel-based production, then you might have, through the systemic risk channels, self-reinforcing effects that make the transition challenging.

And in the steady state, on the other hand, we could ask ourselves whether actually less growth – always assuming constitutions and system structures the way we have them at the moment – might there be, for example, less animal spirits¹ causing bubbles. Might the financial system, the way it is designed now, already be more resilient in a zero-growth economy anyway, or would it not be, and then what changes are required to actually get there. So, this is meant as an inspiration for the debate and I'm looking forward to the thoughts that come up.

¹ *Animal spirits refers to emotion driven financial decision making and herd mentality in investing, particularly in times of uncertainty.*

JW: Thank you very much, Anja, that was great. We'll leave questions to the end, if that suits everyone, and go straight on to what Hans has to say about things at the meso level.

Hans Stegeman



I was in doubt what to present, to be honest, because we want to have a debate and a conversation, so only saying how the world looks according to Hans doesn't seem to be a good idea. Still, I'm going to do it! And it'll maybe be a mix of a systemic view and also what we do at Triodos Bank, because I think what we're trying to do is finance a post-growth economy. And maybe I'll also explain how we do it, not on a practical level, with examples, but on a more abstract level.

There is no clear-cut relationship between finance and sustainable outcomes

- Finance-for-finance makes up a large part of the financial sector

- There is a distinction between investing and investment (Fullerton, 2023)

- Further intermediation (asset manager capitalism, Braun 2021) weakens the link between real-world impact and financial decisions

- Also, funding gaps are illusionary, depending on risk return assumptions

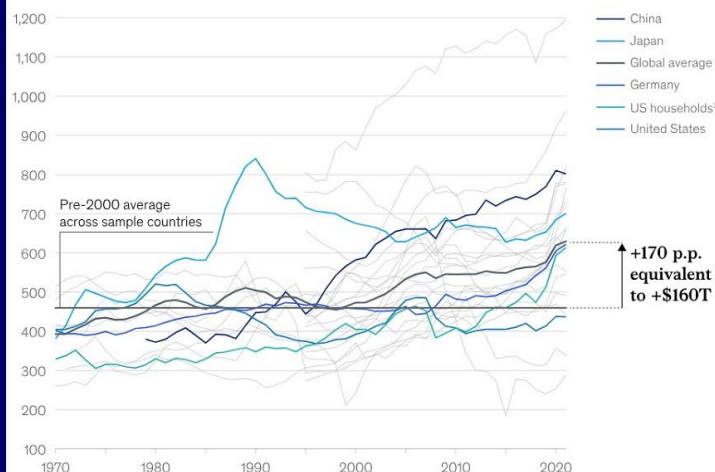
Triodos @Bank

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The global balance sheet began rapidly outgrowing GDP in about 2000.

Global¹ net worth market prices relative to nominal GDP, 1970–2021

Net worth/GDP, %



¹Global average is derived from 30 countries that account for ~77% of global GDP: Australia, Austria, Belgium, Canada, Central and Eastern Europe (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Slovakia, and Slovenia), China, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Portugal, South Korea, Spain, Sweden, United Kingdom, and United States.
²For the United States, household net worth and country net worth differ markedly due to high values of corporate equity relative to assets.
 Source: OECD; McKinsey Global Institute analysis

McKinsey & Company

The message here, and I think it's important, is that **there is no simple connection between finance and the real economy**. It's not straightforward that sustainable finance will have any consequences in the real economy. And there is also no obvious way to ensure that finance can be bounded within ecological boundaries. On the graph, you see a clear disconnect between real economic activity and business-as-usual economic activity. So we can say that we do economic activity and financial development. And that means that a large part of the financial sector is only being the financial sector in itself. From a degrowth perspective, it doesn't make any sense what you do in finance. Only that some people earn a lot of money.

Observation: since there is no clear-cut relationship, finance does not have to be a growth engine

1. Money creation?

- Idea: If a private bank creates money, this leads to a claim on future productivity. If it is not productive, this leads to problems.
- This can be the case, but not necessarily so (depending on what money creation is used for, to what extent it is accumulated or put back in economy)

2. Interest?

- Idea: if a bank requires debt to be repaid with interest (principal + accrual) this leads to the fact that an economy has to grow.
- This depends on the assumption that it requires extra money creation, because otherwise there is no possibility to pay it back
- However, this rests on the assumption that banks accumulate these interest payments. If they put it back in the economy (through wages for their employees, purchasing products and/or paying back to stakeholders) this does not hold

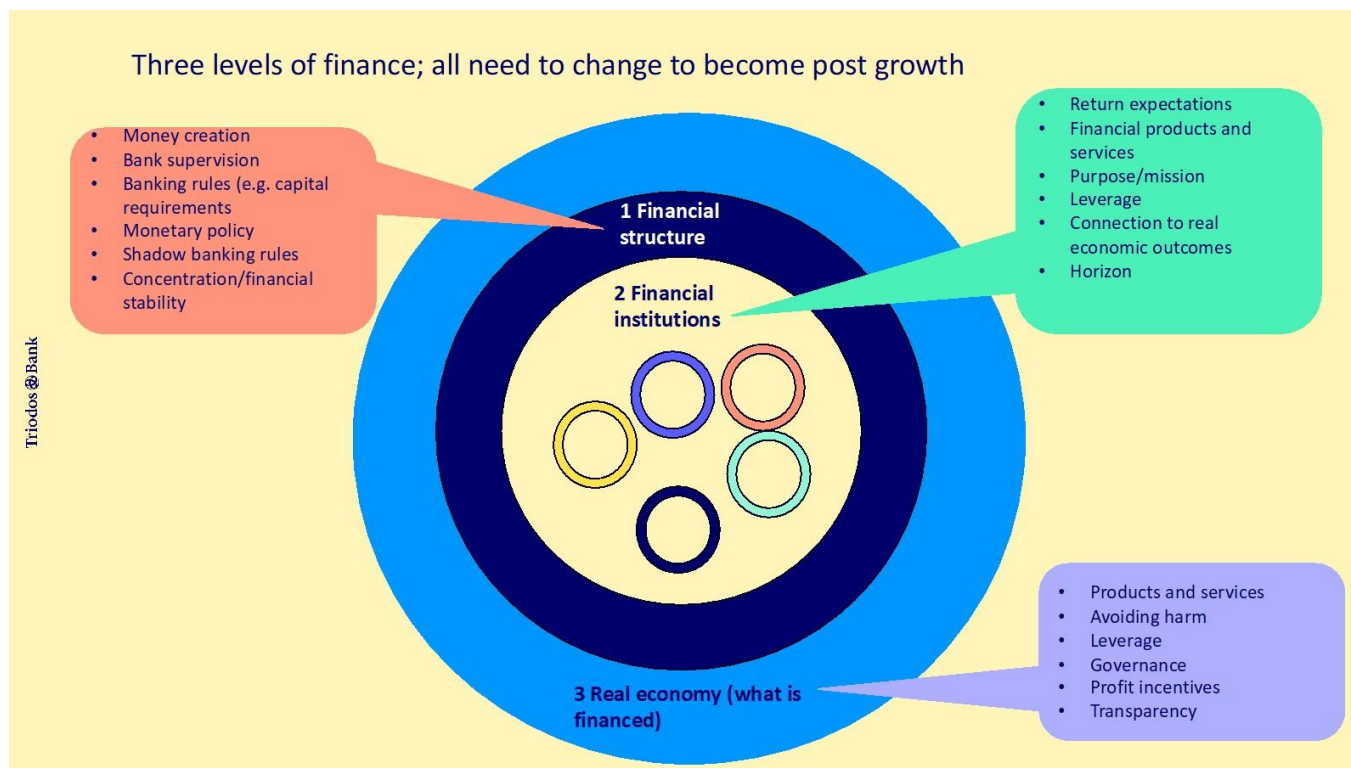
3 Monetary system?

- Every monetary system *can* lead to excessive debt
- ...because every monetary system is a debt-system
- The core of this, however, is in capital accumulation and

If there is no clear cut relationship, finance, to turn it around, does not have to be a growth engine. Coming back to what Anja said, some people say that growth dependence is caused by money creation. If that's the case, that the financial sector causes a growth-dependent economy, you should have a link between real economic activity and the financial sector, but that's not the case.

So maybe there's an opportunity. Maybe there's room to say, OK, if we change the institutional structure – how we do money creation, how we do interest, how we have a monetary system – maybe we can recreate it in such a way that it will help the real economy and also help degrowth. And that's a more nuanced position, instead of saying we have a monetary growth imperative. In the current system, yes we have, but it doesn't have to be the case.

I'll give one example. Private banks can create money for anything, any loan or mortgage, for financing a fossil fuel company, or whatever. But if you say that you can only create money for – and this is normative – useful stuff, that helps degrowth, then you limit money creation. It's still a private bank, but you do it in such a way that it helps the real economy. The other way around, it also means, compared to the current system, you create less money as a consequence. But it doesn't have to be that you change all the institutions at first; that could happen much later.



If you look at all the literature on finance and degrowth or post-growth, you see that almost every time it's only a part of the system that's the centre of attention. My claim here is that it's only if you take all the interlinkages in the system into account, have a complete view on it, that you can have a financial system that serves a degrowth economy. Then you can do investing in degrowth.

Not to explain all this, but one thing is important: because there's no direct link between the financial system and the real economy, it means you cannot change the real economy by the financial system. You need changes in the real economy itself to enable the degrowth financial system to finance it.

You cannot say (and this is where we, as Triodos Bank, are currently): this is what we want to finance but the risk-return profile is not good enough in the current economic setup. So we need to phase out fossil fuels, we need to have pricing of externalities, etc. At least we need part of it to be able to do what we want to do.

So there's always a connection between changes in the financial architecture (the institutional setup), the financial institution itself, (their purpose, mission, what they do) and the real economy. And if you don't take those three lenses on the system, then it will not work. That's what we do at Triodos Bank. And I think it works in part, but not yet at the scale we want.

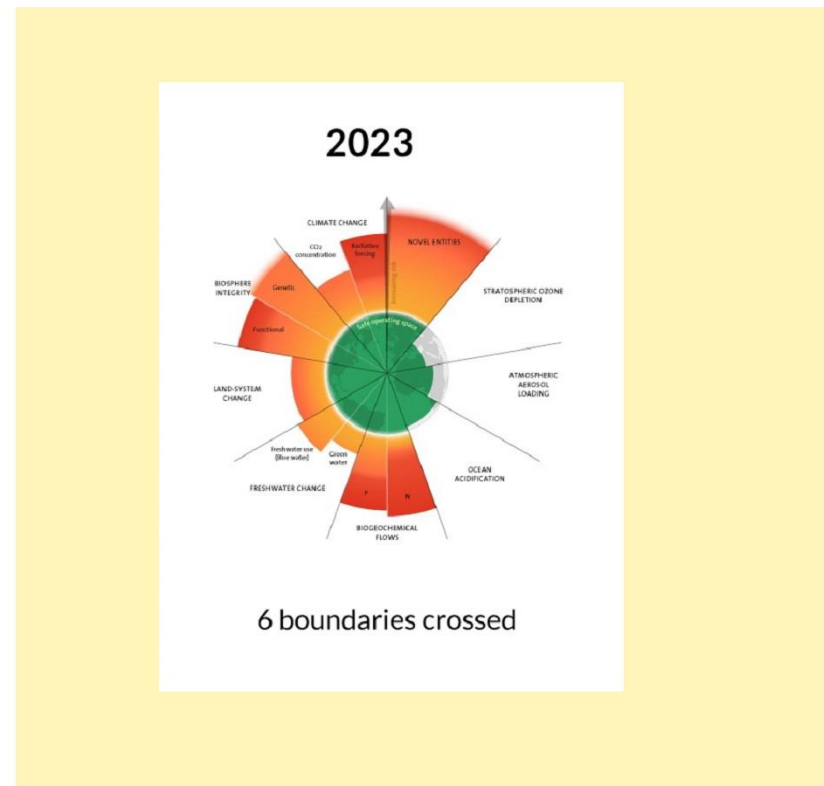
Limits on a macro level

Tie money creation to ecological boundaries and (hence) real economic outcomes

Stricter financial regulation on brown assets (penalties/phasing out) → not only banking regulation but also non-banks

Stricter financial regulation on brown assets (penalties/phasing out) → not only banking regulation but also non-banks

Green monetary policy



What you need to do, this is one proposal, is set boundaries on a macro level. So simply, restrict money creation to ecological boundaries. This sounds great. In practice, I don't know how you would do it because, and this is essential, there is no simple relationship between the financial system and ecological boundaries and what will become activity. So you need to translate ecological boundaries in such a way that they are expressed in monetary terms. And that's difficult. And then you have to translate it to money creation, which is also difficult. But I think there's a lot of room to see what you can do.

Maybe you also have to translate it to institutional levels. So what's the carbon budget of any bank, to take a simple case. What's the biodiversity regeneration objective of any financial institution. I think you have to go to that level to change the system.

And there are also, of course, simple things you can do in terms of financial regulation and green monetary policy, which is all helping but are still within existing system solutions and are not changing the system.

What we try to do at Triodos is finance post-growth, accelerating the transition. This is still at the general level, but we are really thinking about our strategy in terms of transitions. I think most of you probably know the X-curve of transitions. So three things you have to do: phase out unsustainable activities, have a vision of where you want to go, and empower and scale up sustainable initiatives. What we, at Triodos Bank, have done for 40 years is define clear minimum standards; exclusionary material on what we don't finance. So no fossil fuels, no fast fashion, no industrial food production, etc. A lot is what we don't do. And this is clearly the part that needs to degrow. And it's sometimes difficult even to explain to our executive board that, yes, we are already post-growth in the sense that the things, the part that has to swing, is not on our balance sheet, on purpose, because these are our values.

So we don't see a big role for ourselves in phasing out such industries, only in advocating for such exclusions as a best practice or policy. That's our role there, so that's not a financing activity, that's more advocacy that we do there. As for the vision, I think that has changed over the years. Together with my colleague Ernst, last year we wrote our [Long Term Outlook 2024](#) on pathways to post-growth, to be very vocal in the investment community. To say, okay, maybe it should be different, things like radical change, etc. That's what you hear more from us now than ten or twenty years ago. What we actually do is empower and scale up sustainable initiatives. That's our financing activity, that's what we do.

Post growth approach finance

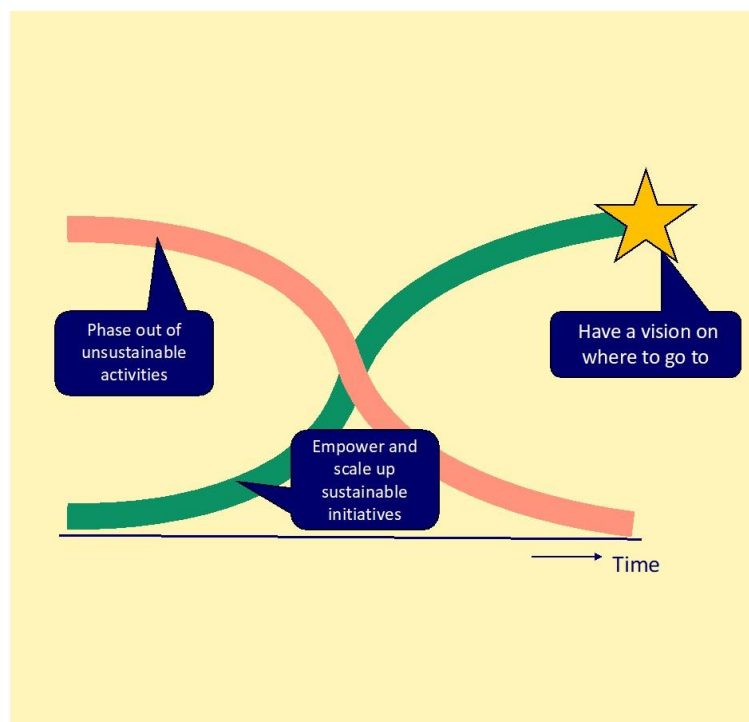
Have a forward-looking vision on the impact you want to create (impact now is not good enough)

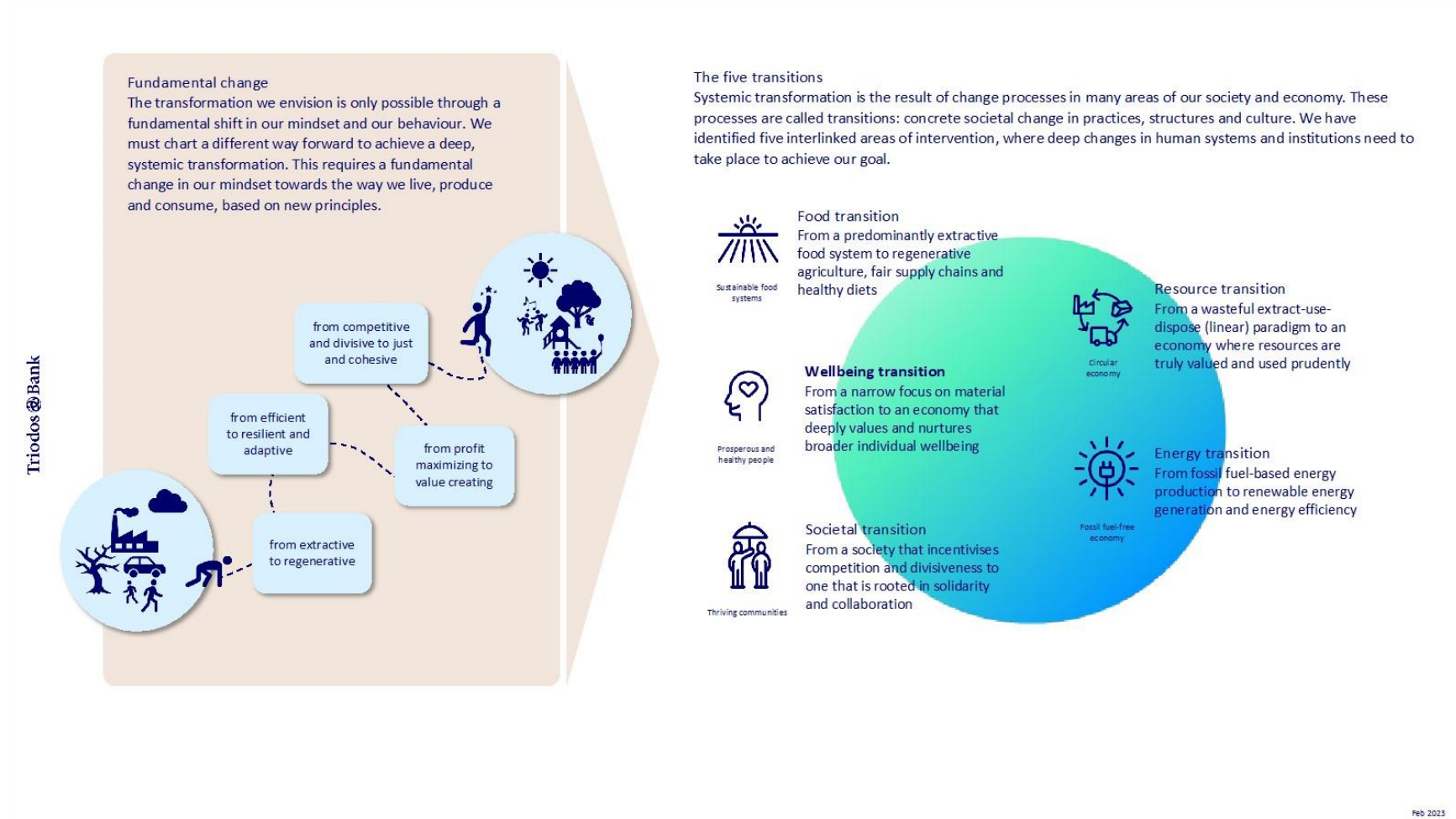
Phase out or exclude asap, don't expect (too) much from transitions

Empower and scale up transformative business

Triodos @ Bank

6





We advocate in our latest strategy for fundamental change. So, from efficiency to all kinds of degrowth buzzwords, and the trick was for us not to say that this is about degrowth, but rather that this is about radical change, something that everybody could be happy with. And sometimes you need that trick because we are in a financial system, and that means that people are still partly in the growth paradigm, and they don't know it, because that's the world that they live in.

So we had all these things from profit maximising to value creation, all those buzzwords, and then we said we have five transitions. But we want to do something different on a transition. We don't want to say sustainable agriculture or regenerative agriculture is good enough. No. What's the next new thing in every transition where we can put our money and leverage our money in the best way in a transition. That's what we have been working on for the last two years.

Transformative finance

		Investment approaches			
		Transformative impact	Impact-first	ESG and best-in-class	Negative and ethical exclusions
Triodos Bank	→ Targets companies offering viable solutions for the transition to a sustainable economy	✓			
	→ Screens destructive and exploitative industries (e.g. fossil fuels, arms)	✓	✓		✓
	→ Assesses company ESG practices and sustainability policies	✓	✓	✓	
	→ Encourages company transparency and public disclosure	✓	✓	✓	✓

We have also followed the history of sustainable finance. We started somewhere on the right-hand side with ethical exclusions in the '90s on the listed side, but that's also what we did with business banking. And that has evolved from there. There was no data, then we were the first ones collecting data, including from listed companies. Then you had ESG and best-in-class approaches, which we also did for a time. Then we went to impact-first, seven or eight years ago. What we did with all our activities was we said, first, we have to see if it's good enough. Whereas ESG is on policies, on the side-effects of the product you make, so you can have a best-in-class oil company, impact-first is what is good in terms of product and services that the company makes in the here and now. So that's more about the SDGs.

And what we are now trying to do is transformative impact. What is good in the future. How does anything we finance contribute to that world. I had a slide where I wanted to show the approach we have. How it's different for our relationship managers in that we try to understand how a company is, in terms of product and services,

but also, for instance, if we find it's an SME company, what's the ownership structure, what is the purpose of the company. That was already unconsciously done by our relationship managers and we tried to formalize it. So not only looking at the products and services or what the company's doing, but the networks, the purpose.

We had, last Friday, a post-growth festival at Triodos Bank with around 200 clients, the business banking clients, and we had workshops on profit, on purpose, all these kinds of elements. It was to make them aware that if you want to contribute within finance to a better future, you need to approach it completely differently than mainstream finance is doing. I hope we will have a discussion later on, thanks.

JW: Thank you, Hans, for that. It was really interesting to understand more about how finance and the real economy are actually decoupled. Really interesting to hear you say that Triodos Bank is already post-growth in respect to the X-curve.

HS: At least Ernst and I think so, we still have some work to do.

JW: It sounded plausible! And also the difficulties of communicating about post-growth within the current financial system, not to scare the horses type of thing, you know, but to still get the message across.

So, we now turn to our final panellist. Alex Lopez will explain Ekhilur Cooperative to us. And it's a fascinating, practical application of degrowth monetary thinking within the Basque Country. Thank you, Alex.

Alex
Lopez



Ekhilur Experimenting a New Monetary Paradigm in Real Life



This is in reality an experiment; it's not a silver bullet, but it may help to give some ideas. What we are doing is experimenting with a new kind of money. We are experimenting with that money in real life.

Economic sense for degrowth

Ekhilur want to create an economic environment where degrowth makes economic sense. For those who are interested on the theoretical bases on which we work, we have a short post published in:

<https://medium.com/postgrowth/negative-interest-economy-a-monetary-paradigm-for-a-post-growth-system-628e0cf34f1>.



Why are we experimenting? Because we want to give a new economic sense to degrowth policies or futures, or to anyone who wants it. In the current system, what has economic sense is any activity that has growth potential; a growth sense.

So, if you do something that has degrowth sense, it has no economic sense for most people, even if it's better for all of us. The perception is that it makes no sense. So, what we want to do is try to create a new economic paradigm where degrowth has economic sense.

We have a theory based on that [online](#), but we are not going to go into that now.

Money: A Social Agreement

The commodification (monetization) of almost all aspects of our life makes the use of money so internalized that we hardly think about it, beyond how to get it to live in today's society, however money is a social agreement and as such it is possible to change it.

1 Money is the blood of the system

About 97% of today's money is digital.

Payment systems are the veins through which it circulates.

2 ekhilur payment system

Ekhilur is a non-profit consumer cooperative whose main characteristic is that has its own payment system regulated by the Bank of Spain.

3 ekhilur creates its own payment network

ekhilur cannot create money, but can create veins (payment networks) through which the money that enters the system circulates.

What we are going to try now to explain is that money is everywhere. We need money to live inside the system. What we don't think about too much is that money, in reality, is just a social agreement and it can be changed.

What we do is to change it. If we consider money as the blood of the system, payment systems are like the veins of that system. In the cooperative, we cannot create money because we are not a bank, but we can create a payment system and control it. And that is what we have done. We created a payment system regulated by the Bank of Spain. And we have given that payment system some characteristics that we wanted.

The main reason for the payment system is to create new veins in the real economic system, to capture money, to channel to our payment network. We are taking money from the system, putting it on our payment system, changing its characteristics and transforming it into a new kind of money. And that new kind of money works inside the payment system in a digital platform.

Controlling the Payment System

If you control the payment system, you control its rules and by extension the characteristics of the money that circulates through it.

Regulated payment methods

Did not modify the characteristics of legal tender money.

Ekhilur

Has implemented features of local currencies (Demurrage & money exit cost) and loyalty systems within the ekhilur payment system.

Program the money

ekhilur system simply marks the money to circulate where it is of interest within the system and behaves the way it is of interest to behave.

Controlling the payment system means we control the money inside the system. So we have implemented some features of local currencies – like demurrage and some money exit cost, and also a loyalty system within the payment system.

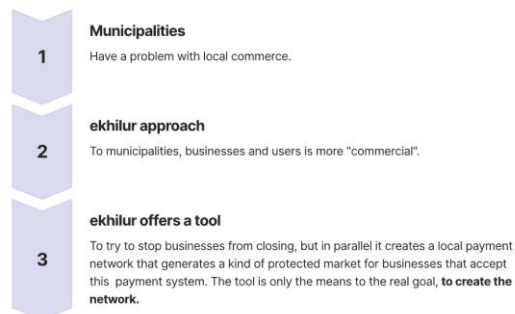
That means that we can program the money inside the local payment system. We don't have a dependence on Visa or any other payment network. We are creating our own network inside the real economy.

Eventually, there will be an Ekhilur network with those characteristics.



The Loyalty System

Why use a loyalty system? Because we have seen that the social ethical incentive is not strong enough to generate a change of habits in the use of a payment system in a **large enough segment of the population** to be significant enough to generate a real change.



Why do we use a loyalty system inside the payment system? Because we have found that ethical and social incentives are not enough for people to change their habits in a payment system. To use money, even if it's a wonderful kind of money, people don't change their habits very fast. So we implemented a loyalty system to attract more people, businesses and local economy to get money into our system.

The loyalty system is also needed to make a commercial approach to municipalities. Because you cannot go to a council and just say we are making a new role for money and a new economic system. So the loyalty system gives us an excuse to implement it within the municipality – to create those veins inside their local economy.

What we offer is a tool for local commerce. Usually, a problem inside a municipality is that local commerce is disappearing. This loyalty system inside the payment system functions as a tool to avoid that or to try to find a better solution.

But the real means of the loyalty system is to create a network. We are looking at an objective beyond what the municipalities see. They see a loyalty system, they see a commercial instrument, but what we are doing is creating a network with the characteristics that we want it to have.

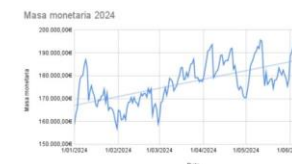
Impact on Local Economy

In a survey conducted in May 2024, 39% of respondents stated that since using ekhlur they have been buying more in local commerce. 69% said that among the things that attracted them to ekhlur was the knowledge that they were contributing to the local economy.



Community Impact

Increased awareness of local businesses and producers, and their importance. Causes changes in the consumption habits of the users.



Accumulation of wealth

Retailers are getting used to not accumulating money in ekhlur accounts to avoid costs (demurrage). First impact on one of the bases of capitalism, the accumulation of wealth.

We are getting a local economic impact. The loyalty system is working quite well, so the payment system is becoming economically viable. We don't need to have help all the time from the municipality; there will be a moment when we will be totally viable economically and we will have the independence to make other things.

We did a survey in May this year, and 39% of respondents said they've bought more in local businesses since they started using Ekhlur. The system is coaching a change in people's habits.

But there is another side effect that is interesting. The local shops, when they save money within the payment system, they incur special costs that I will not explain just now, but if they keep their money inside the system, they incur costs. They are starting to get used to having to take the money out. We are impacting accumulation, educating retailers not to accumulate money inside the system. We are associating accumulation with a cost. You have to do something with the money – take it out of the system or use it inside the system, or some other options that we are interested in developing, which I will explain later. We are changing the behaviour of local commerce, the behaviour of real economy actors.

Cuantitative Impact (5 months 2024)

20.000 inhabitants	Hernani (Gipuzkoa, Basque Country)
1200	Individual Accounts
125	Professional Accounts

62,500€	50,000+	1,15M €
City Council Investment	Sales Transactions	Volume of Transactions

This is the quantitative impact in the first five months of 2024. Hernani, the town where we are doing the experiment, has 20,000 inhabitants, in Gipuzkoa in the Basque Country. We have around 1,200 individual accounts and 125 professional accounts inside this small city. For the loyalty system there, the council has invested 62,500 Euros. That has meant 50,000 sales transactions, and we have transacted more than one million Euros.

But the interesting figure is the 50,000 sales transactions. That means that there are a lot of repetitions. The first thing we need to do is create a habit of repetition, to get people to use the payment system.

What we are seeing is that the created habit and the economic incentives to use the system are expanding the system inside the local economy. That is what we wanted with this experiment, to make more veins and to control the local economy. The more money we have inside this system, the more impact we have in the real economy.

Ekhilur: Next steps 2025

Hernani's figures are interesting even though the model is not yet complete as the city council has yet to be integrated into the system.

- 1 Integration of City Council**
 Expected to do so during 2025 when ekhilur accounts will become current accounts with IBANs.
- 2 Local Financial Circuit**
 Retailers will be able to avoid exit costs and demurrage by making short-term deposits in the cooperative's capital stock. Accustoming them to not receiving interest on deposits.
- 3 Expansion of Ekhilur**
 Expansion to other municipalities and regions in the Basque Country.



A next step in 2025 is to integrate the city council into the system. We have to convert the Ekhilur accounts that are electronic money accounts into current bank accounts with an IBAN number. That way we can integrate the city council and also more generalist retailers, like energy and telecommunication retailers. Those are the ones we want inside the system because Ekhilur uses a governance system with one person, one vote. The control is with those 1,200 people. The control is not with board members. We had an assembly last week in which the people decided what to do with the system.

The second step is to create a local financial circuit. I commented on that before. We want to give local businesses an option to not have to pay for taking their money out of the system, but to put the money in a deposit in Ekhilur capital stock for some months, and after that they can take it out with no cost. What we are doing is creating a financial circuit. We have a commercial circuit and we take the excess money out of there and put it in a financial circuit for the local economy. The financial circuit will have some advantages. We are making a micro-economic system inside the local municipality with a real economy and financial economy, a local economy with limits. We've started doing that. And finally, what we want to do next year is try this in another municipality, to see if it is possible to replicate it in another place, using the same methodology that we have used in Hernani.



Ekhilur: A Vision for the Future

ekhilur is testing in real life a new monetary paradigm that could help develop a new economic paradigm where degrowth makes economic sense.

Local Economy

ekhilur could help the relocation of economic activities that have been outsourced, especially those related to food and food processing, **programming money** to support for these activities.

Negative interests credits

Demurrage will make it possible to offer negative or zero interest loans within the ekhilur ecosystem that are profitable and endorsed by the entire community. **Economic sense to local degrowth policies.**

Bottom up development

Local councils are the base from which to build the change, as they are **the institutions closest to the citizens**. The more municipalities, the more pressure they can exert upwards to the next level.

Our vision for the future is, as I said at the start, to give economic sense to the degrowth paradigm, and to start getting people used to another kind of economy, another way to work inside the economy. Still, it's very initial steps, but what we are seeing is that it is powerful enough to make habits change.

What we want to do in the future is fund relevant activities in the local economy, especially food and food processing, and to have the money for that. We can use the loyalty system for whatever we want. We can program it to benefit the activities we want inside the local economy.

The other vision is negative interest credits, which I also mentioned earlier in the presentation. We don't know, it's an experiment, but we think we can have negative interest credits inside the Ekhilur ecosystem and that they can be 'profitable' and can be covered by the entire community. If there is a default, there will be some mechanism within the system to clear that debt and dissolve it inside the community. I mean, all the community will pay that loan, if there is an unpaid loan. And that can make economic sense to local development policies, at a local scale, perhaps. I don't know what the policies can be. But these kind of credits will have economic sense inside the system.

And finally, what we are looking for is the bottom up development of this system. We see municipalities as the closest institutions to citizens, so we have

started there. And the idea is to implement the system in different municipalities, so that different municipalities start to exert pressure upwards and then we can try to go to the next level, from municipal to the regional level. And that regional level starts with the same paradigm and from the regional level to the next level. Well, that is what we want to do. We don't know if we will be able to pass the municipalities level. But that is the idea.

There are a lot of things that I have not explained. We can talk about them in the question time.

JW: Thank you, Alex, for explaining degrowth in praxis there. You have a loyalty system whose purpose is to create a network that looks commercial or acts commercially, but has the characteristics of degrowth built in, and that becomes habitual over time through the loyalty payment system, creating economic independence in the area. And it's reducing accumulation.

Q&A

JW: That's three really interesting levels of looking at finance. It's obviously a very complex system. Every time you scratch the surface there's something more interesting and complex to unravel.

JW (Q1): I'll ask a question first that came from our community to get the ball rolling. There are other people working in, and thinking about, this space. And one of those sets of people is Doughnut Economics. I reached out to Erinch Sahan at Doughnut Economics Action Lab for some questions and he kindly gave us some. I'm not sure which of our panellists would like to answer this... When we think about money, money is power. So the big funds that have a lot of money to allocate in the system in investments, if they're going to change and not focus on growth, they will become smaller. Is there a fear built in that if they're investing in degrowth and investing in something that's getting smaller that they will lose power, and is that part of the fear that's holding back paradigm shift?

HS: I can start. Yes! It's what we also try to do. In two ways the financial system has to become smaller. The first one is, like I said, finance for finance doesn't make any sense and part of it is dumping money around and getting return on assets and whatever. So that means that the interests of those [investors would be] hurt. And the second one is that what you do should be linked to valuable real economy outcomes. That means that also a part of it should be phased out. All those returns made on all of that, those are vested interests, of course, and there is a lot of power behind it. And what I did not share earlier is that the structure of the financial system has changed completely over the last 10 to 15 years, after the financial crisis. So it's not anymore about the banking system, it's about the asset manager economy, where you see that the asset managers or intermediaries in the system have only the mandate to do risk and return. They have a lot of power without having the money themselves to steer the economy. And we should address those power structures, not only looking at where the money goes, but the power structures behind it to get real change, and that's really difficult.

JW (Q2): Following on from that question, the likes of Blackrock and Vanguard, etc., they use an investment management system to help them allocate funds, which is called Aladdin, I think. It's a big software tool that they all use. The big tech companies use it, the big insurance companies use it as well. Do we need, in a degrowth or post-growth finance paradigm,

to have our own allocative and risk management/assessment software? Do we need to replicate it in a way?

HS: Yeah, I think partly we do. And that's what we try to build. Yeah, it's not a risk management system, it's an impact management system that we try to understand. And also relating to the same kind of language, how you can, what we call, transform, or have transformative impacts, or do degrowth investing, in such a way that you comply with risk regulations. **Because risk mitigation does not help anything. It's only doing less bad. It's not doing good. It's not helping the system to move in the right direction. It's only hindering it from moving more the wrong direction.**

But what we also need to do is to have the data to understand where we have to steer. Not because I want to have the data, I want to have our colleagues make their own value judgment on what is good and bad. But that's not how finance works. We also need the data. So we're in the process of creating our own forward-looking indicators, where we should steer value in the end. And that's a kind of software you build.

And I really hate it, to be honest, because I think data indicators are reductionist and we want to take a holistic picture. In finance, it's not working at the moment to say, yeah, the project holistically... It's not good enough. So we also need the data. We also need to create a new language in terms of data as an intermediary to get things done. It's not because I want it, but still we need to do it to move on. So yes, we need to relate to the software that's already there and build a better one, not because it's better, because we need to.

Audience 1 (Q3): I have a question about ROI, which in my opinion is the issue. I'm a co-founder of an investment platform for pre-seed and seed innovation in the agriculture and food space. And something that we see again and again is really amazing innovation addressing issues of water and salinity and how can we grow more food in regenerative ways. And then the entrepreneurs, who are usually from academia, usually really passionate and intelligent, come starry-eyed into the startup world, into the entrepreneurial space. People come onto their cap table with an expectation, like these are impact investors, so maybe it's 4x or even 3x. That's their expectation. After two or three years the companies will, 99 percent of the time, become exploitative in their relationship to the environment because of the [pressure for] ROI. What can return on

investment look like [in a degrowth context]? Because at the end of the day, none of us are going to put our capital somewhere where we're not having any kind of return. So what can it look like in a way that we can tangibly understand that return has to be something else?

HS: Yeah, you said “any kind of return”, I think that’s part. So what is that any kind of return? How large is it? Especially in early stage capital, they expect a lot of ROI.

Audience 1: Because it's so high risk.

Audience 2: The problem is the risk, **the way we calculate and think about risk in today's financial system is incorrect because it only incorporates a fraction of what the issues are. So when you base risk without the planetary boundaries, which is what we do, you get the wrong conclusions.**

HS: But what we do or what we also try to work on, and we are not the only ones, is to have a better understanding of ROI or impact-adjusted returns. So this is also one of the intermediate ways of rephrasing language and rephrasing data. You say, okay, we have ROI. We have a history of making only regulation on financial risk and returns. Can we also do it on non-financial risk and return in such a language that it leads to different decision making? If we can have an impact or end-risk or environmental risk-adjusted return as the new normal, then it cannot be exploitative because [that] would mean a lower ROI. So you need a new language in terms of how you approach data, etc. So that also means new regulation to get there. This is really within the system, so this is also why I don't like what we still have to do to move the money a little. Because I think it's not ‘different’.

Audience 3: Can I try to add something? I think personally, partly with ROI expectations, you'd like them to be lower because that puts less pressure on a startup to make money. But I think you can also look at incorporation structure, like the power an investor actually has over startups. And one of the startups at [Triodos] post-growth festival on Friday, they've done a steward-owned equity raising, where you just make an agreement with investors. You get half my profit until you have twice your investment, but I don't talk to you in strategy meetings and you don't vote on whether my policies are correct every year. So that way you can also try to shield your organisation. And obviously that's not an attractive deal to investors because most startups give you those

rights. But I think that's something that you maybe then have to, at a more macro-institutional level, disincentivise. If we see steward-owned businesses as more fit for a post-growth world, then you should tax them lower, or something like that. You should make it attractive in another way to choose that form. That's not something that perhaps we can expect from individual businesses, but you [could] expect it from a regulator.

Audience 2: You have a system, where – having worked in impact investing for 10 years plus, and before that in banks - why would any investor do this? Why? Your whole hope or your future depends on that rich person who works at a bank being nice. And that's just not going to happen, in my view.

Audience 1: It's already so hard to get capital into the impact and sustainability space. Then the whole space, the whole sector, is ruined by us trying to prove that it actually has...

Audience 2: All these entrepreneurs will fail, because at some point there's a choice that investors will choose: this one at 8 and this one at 1. Where Alex's approach, if I understand correctly, is to repurpose [finance] for the local economy and make... Right now we have a system where we've handed the reins to finance, complete insanity. He's saying, no, we're in control of the money. Then you don't have these issues...

AL: Just to give a real view. In our system, every month 200,000 Euros go in and nearly 200,000 Euros go out. What we have now is a circuit, that money comes in, because there is an incentive to the money to come in, and money comes out, because we have not enough incentives to keep the money inside. We want to give an incentive for the financial circuit to try to take not all of the money, a part of that money, to have like a market. In that financial circuit, the money is going to be in and out all the time. But there will be a monetary mass inside the circuit that will be in use and will be stable. So what you have is a stable monetary mass, a stable money quantity/stock, to use to finance whatever you want with zero interest or even a negative return, because you can do it inside the system. So what we want to see is what will happen.

And what we need in the future is to see in what things they invest in. Because this is a tool of two sides. It can be used to do good things and it can be used to do bad things. So that's why we want to work the governance of the co-op like an energy co-op in some way. We also want to make a structure, as we said

before, bottom up. I mean that the commercial circuit and the financial circuit will be in control of the local economy. A lot of local economies can then make a bigger economy and affect not only the local [community] but also the regional one, if all the local economies are aligned.

Audience 4: Yeah, let me just talk to your comment. I think even if you have zero interest, even if you have a better governance, still many activities do not bring a life standard that could thrive, especially with the housing bubble and here people have a crisis that they see less and less in their salaries. Even if you do a productive business, like tourism, you don't make a living. And I think even if we reach low interest rate, negative interest rate, even if we totally democratise how we handle the decisions within the co-op financially, as long as we keep having an economic system that exploits housing and makes everything more and more expensive, we have a problem. There was a presentation of two farmers and they have a totally regenerative business that works, they have clients, but they make seven hundred euros. They work all day and they cannot live on that. So if we would approach housing as something affordable, if we would have more public services and public abundance, this will be self-sustained. But if every year housing here in Barcelona increases – one hundred and fifty percent in the last ten years; real salaries nothing – we are racing against an impossibility. So I just want to bring that public abundance of public services and directly challenging capitalism, and provisioning at least on energy, housing and food, have to be on the table. Because I think if we play by the rules of the market, we are just exploiting ourselves.

JW (Q4): I have a question for you, Anja. Going back to the Gordon Growth Model, and r , the discount rate. Should we be discounting the future?

AJ: I put the Gordon Growth Model here to have conceptual clarity on the difference between transition and steady state. So the role of that model was to illustrate that difference.

JW: OK, it was not to mention the discount rate per se, but degrowth.

AJ: Yes.

JW: Hans, did you have a view on that?

HS: Yeah. I think there's already a lot of literature on it, so for economic values and economic investment, you should discount. You have a depreciation rate and it makes complete sense to have a discount rate.

But for nature, for instance, it's completely nonsense. Maybe you should have a negative discount rate. If you take out more than the regeneration rate. It's negative in the future. So then you should have a negative discount rate. And also on social side, it's questionable if you should use any discount rate at all.

So to separate what money does, that is my claim always, what money does in the real economy is important to understand, right and wrong and what you should do with it. So that also relates to the system that Alex is creating, that they do want to understand better what money is doing there. And that's the link also with macro, if you don't do it. It's also related to the question [on ROI].

You cannot change only the rules partly or half, or have people doing sustainable finance if it's not really... if you don't see it back in the real economy. You always need to have that. And to be honest, part of what we try to do is incremental. It's within the system trying to change the system. But that's also what we should do, to at least show that you can make different choices. It's definitely not good enough. But we also have to start somewhere. So that's always why I have this kind of discussion. Yes, we have to start somewhere and it's completely imperfect, so let's help to do it together. And then you have academic discussions and where you should go and what you want to achieve. And we all understand that we're not going to get there tomorrow and the question is what can you do tomorrow? That's what I'm trying to do also.

JW: What do we do on Monday?!

Audience 5 (Q5): I have a question that relates to the vision you put up on one of your slides. I'm a researcher myself and I also have a startup in the clothing sector, so I wear two hats and I experience different approaches all the time while trying to work in a post-growth space. I wonder how far advanced you are on this vision and if there is a vision? I know we're all trying to figure it out here at this conference, more broadly. But one of the things that, I think it was Jason Hickel who wrote about the difference between the growth-based enterprises and companies, that capitalism is not necessarily an enterprise that makes a profit. You can make a profit, but they need to distribute it within the enterprise in a sustainable way,

that it can sustain itself, pay the salaries, pay for the environmental externalities instead of making them an externality. Then these kind of enterprises could sustain themselves in the future. But these are likely to be SMEs, if I'm not mistaken, having read his perspective. And it doesn't leave much room for global, large enterprises. It's deglobalization, we're talking a little bit about. So did you reflect on that? Because I agree, the vision of the future is critical. If we don't have a vision, we can't build roadmaps. So what is your stance there? What kind of economy in the future do you want to support?

HS: Yes, we have a vision, so we have endpoints of transitions, where we say, oh, we should more or less go and do that, be carbon neutral, regenerative food and agriculture, circular economy, that kind of stuff. And especially on the resources and energy side, we know where we want to go, this is degrowth. We know where we want to go, in some sense. What is more critical at this moment, at least for me, also in my work is, okay, what are we gonna do tomorrow, on Monday, and what's the step that brings us a little bit closer.

Also, related to the rest of your remark, does it make sense to say for-profit businesses cannot exist? I think there are degrowth scholars and I talked about it with Timothee Parrique, but the small thing is what do we do about it on Monday? Yeah, abolish all private ownership. Okay I can see the point, and I can see that it is negative, but it does not help us in a conversation on what we should do tomorrow. So I'm more nuanced, like also Jennifer Hinton saying, okay, you're a different source of profit, and again, you're right or wrong.

And also on the financial system, should we abolish interest rates, should we abolish completely the financial system? No, I think that will not help, but you can improve it a little bit. And so I'm a little bit nuanced. Yes, we have a vision also at Triodos of where we want to go. But for me it's more important, okay, but what is the next step? Not even a roadmap, because we don't know what will happen next year. But we need to navigate and evaluate, are we going in the right direction? And that's what we try to do also with transformations and transitions literature. So very consciously trying to understand our role in a transition. What's the next step? What should we finance, what should we stop financing?

So, for instance, we have a long history in organic farming at Triodos Bank. We don't do conventional farming, only organic. And we have to ask ourselves the

question, is that good enough? Should we not go to only plant-based? And what will we do with our loyal customers in organic farms? So trying to take steps, every time, can we go for it, does it make sense. For me, that's more valuable in practice to have impact and not only have academic debate, which I also very much like, but I also want to have impact in the real world. And therefore, I want to make the questions a little bit smaller sometimes. Ok, what can we do. And I see in your faces, this does not help! But that's where we are.

AJ: I think I'd like to jump in on what to do completely to also relate to your question beforehand. So, I mean, if you have private investment, you will always have financial incentives, right? So, only having data, relating to your point of view previously, I think data is important, to have data on which companies contribute how much to social and ecological goals and how much they actually contribute to destroying certain futures. So having the data is crucial. Or is one way forward, let's say, one possible pathway to actually have policy assessments of these risks and contributions. Which is being done, so that's being developed.

But the second step is then to channel the financial flows on a macro level through essentially public regulation or public flows. You cannot expect a large fraction of financial actors who also have a lot of incentives to act for other sub-interest through the competition in the system. I think it's not realistic to expect a large fraction to then by themselves switch to valuing the non-monetary return. So you have to have these macro-level channels in combination with the data to account for holistic, not only CO₂ emissions but all planetary boundaries. But still, I'd say that there's a possible way forward. Right? There's still internalizing externalities. Is that enough? So that's also, I would say, an open debate.