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Kick-off Workshop in the Czech Republic

15 January 2019

CIC2030 methodology for tracking national energy and climate investment flows

Case study of German climate finance landscape 2010/2016

Contents

- Introduction
- Scope and boundaries
- Sources and intermediaries
- Instruments
- Uses

- *Regulation on the Energy Union Governance requires designing national energy & climate plans (NECPs)*
  - *Annex I: a binding template*
    - *Section 3 "Overview of investment needs"*
      - *Chapter 5 on "Impact assessment of planned policies and measures"*
        - *existing investment flows into decarbonization*

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Introduction

Climate finance landscapes / climate and energy investment maps:

- comprehensive bottom-up mapping of financing flows dedicated to climate change action and energy transition
- covering both end-investment and supporting financial flows from public and private stakeholders
- drawing the picture of how the financial value chain links sources, intermediaries, project managers and the end investment (EEA)

CIC2030:

2019: Germany	IKEM
2019: Czechia	CVUT
2019: Latvia	RTU

Existing studies:

2011 – 2017:	Global	CPI	2014 – 2017:	France	I4CE
2012:	Germany	CPI	2016:	Belgium	Trinomics
2014:	Indonesia	CPI	2017:	Côte d'Ivoire	CPI

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Introduction

Specific questions are:

- How much capital was invested climate and energy transition in 2016?
- Who were the main investors and what made this investment possible?
- What financing instruments were the most common?
- What type of measures were invested in?
- What has changed since 2010?

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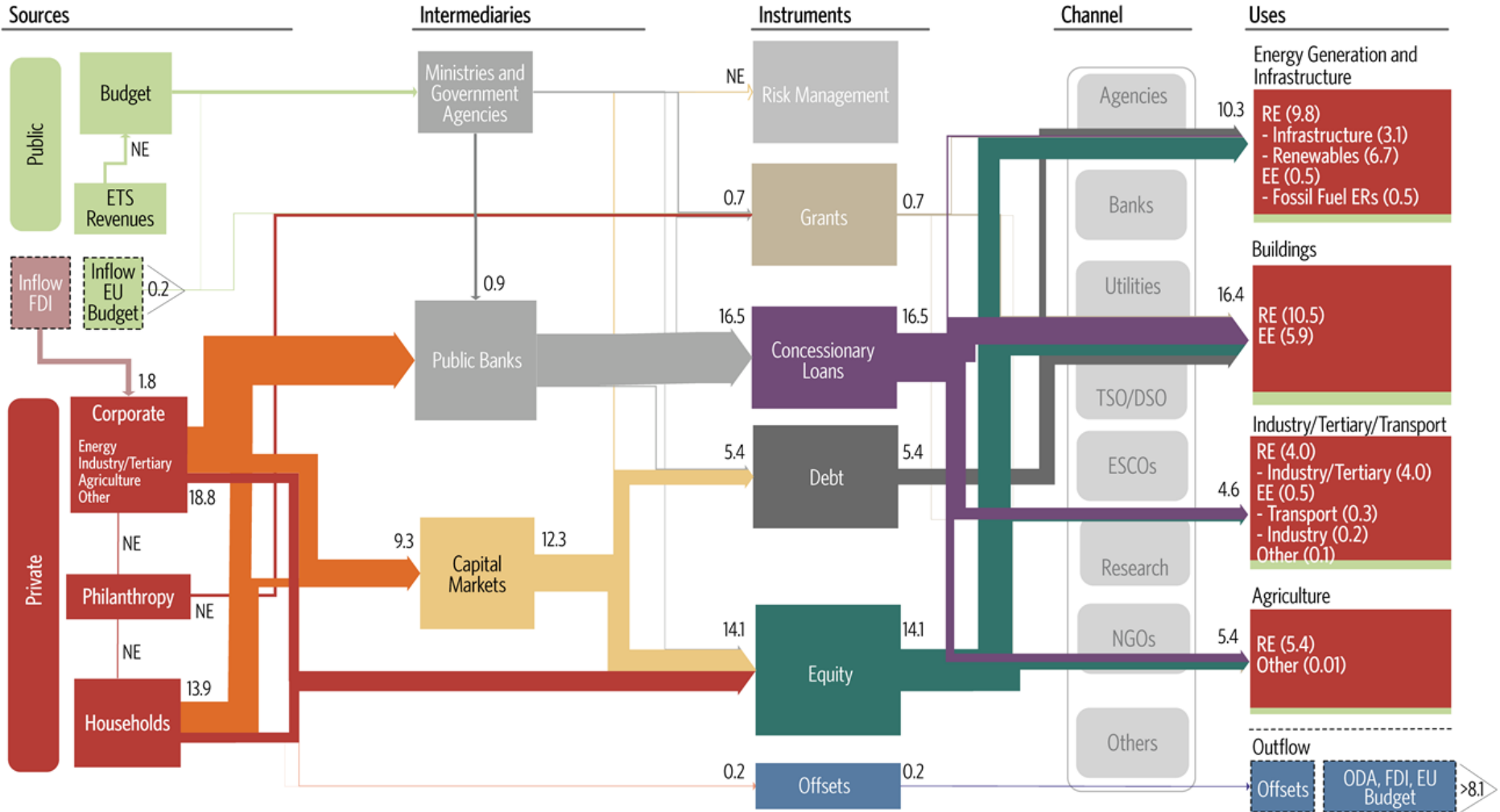
Germany 2010



Advantages and limitations of the concept

- **Advantages:**
  - A visual snapshot of stakeholders, finance flows, and recipient
  - Potential over- and underspending for further investigation
  - Comparing countries' landscapes may help understand how to improve policies
- **Limitations:**
  - A significant amount of input data
  - The results do not permit to assess directly
    - The impact or effectiveness of policies and actions
    - Gaps to reach climate targets
    - Leverage of private money by public finance

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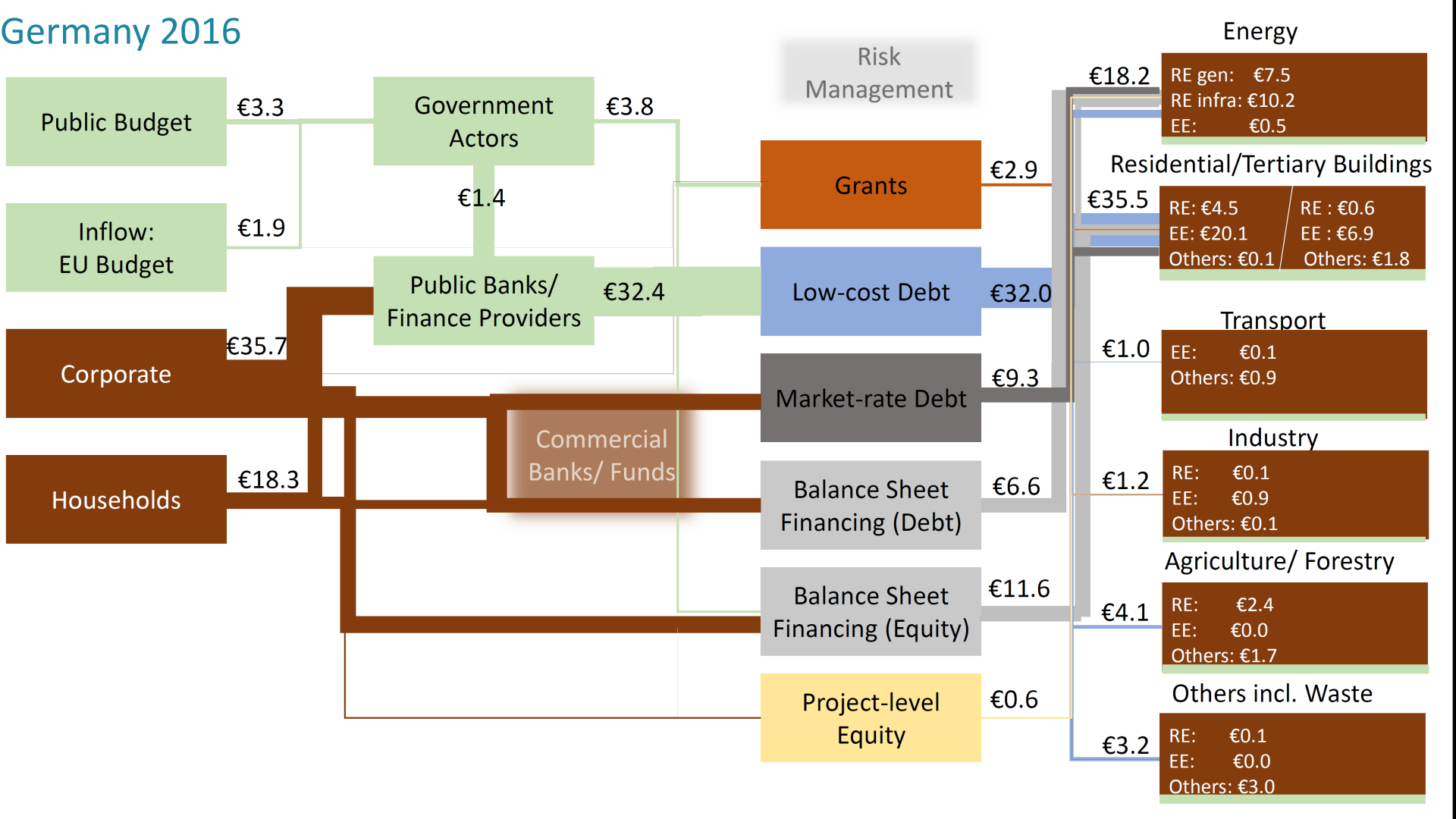
Germany 2016



Scope and boundaries

- Temporal + sectoral scope – mitigation / adaptation when the latest data is available:
  - Energy generation and grid, industry, buildings, transport, agriculture
- Measures:
  - Climate-specific investment vs. climate-related
- Investment scope:
  - Tangible vs. intangible investment
- Financial instruments:
  - Primary flows (cost of capital, feed-in-tariff etc are not reflected)
- Cost definition:
  - Incremental vs. total capital investment

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Scope and boundaries

	CLIMATE-SPECIFIC INVESTMENT		CLIMATE-RELATED INVESTMENT	
	INCREMENTAL COST	TOTAL CAPITAL INVESTMENT	INCREMENTAL COST	TOTAL CAPITAL INVESTMENT
TANGIBLE	Energy efficiency, non-energy related reduction measures	Renewable energy	Measures that deliver co-benefits in terms of emission reduction e.g. agri-environmental measures, investment in transport modal shift, etc.	
INTANGIBLE	R&D, information policies, training, and capacity building			

Included in the German Climate Finance diagram

Included in discussion

Source: CPI (2012)

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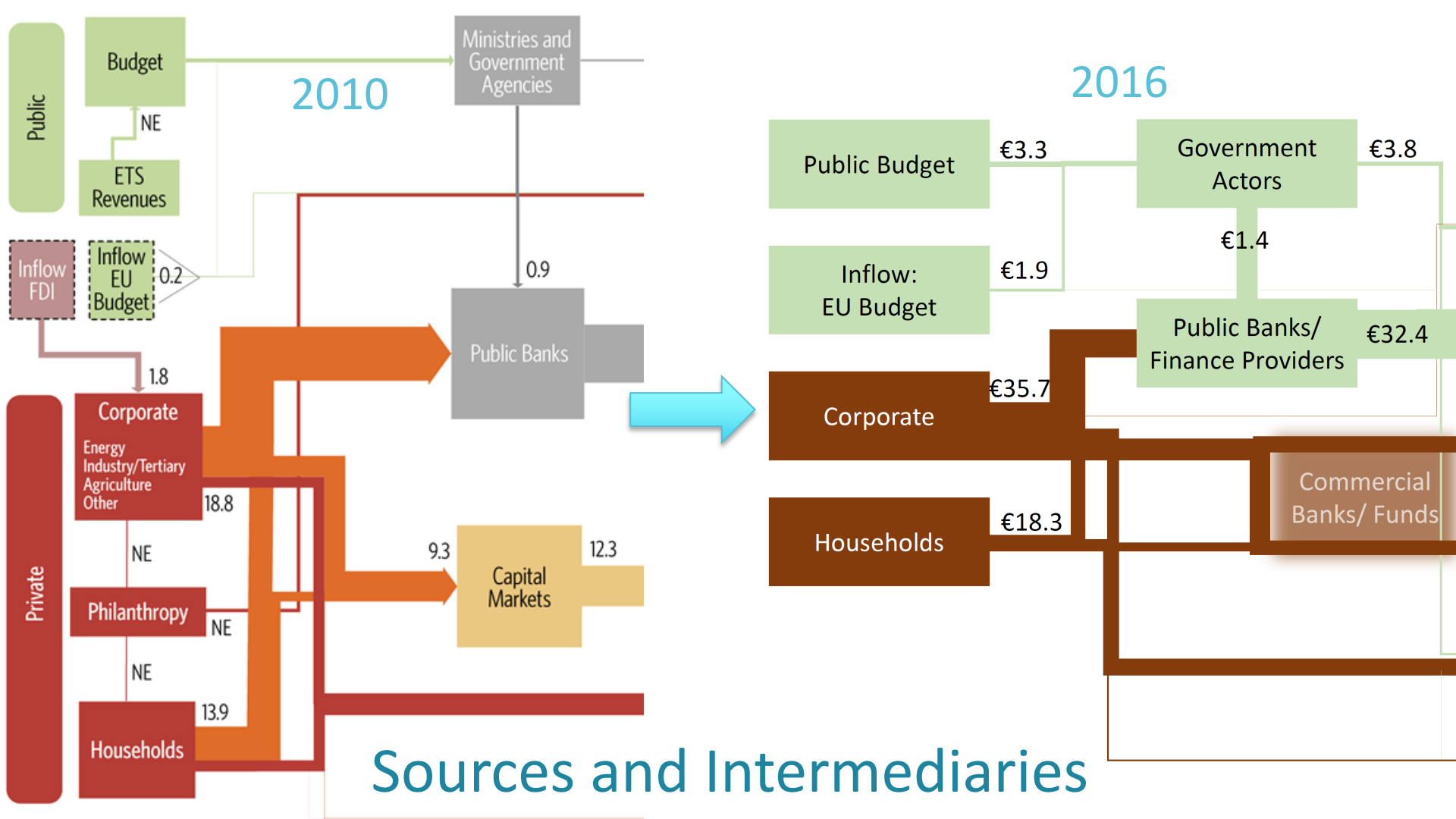
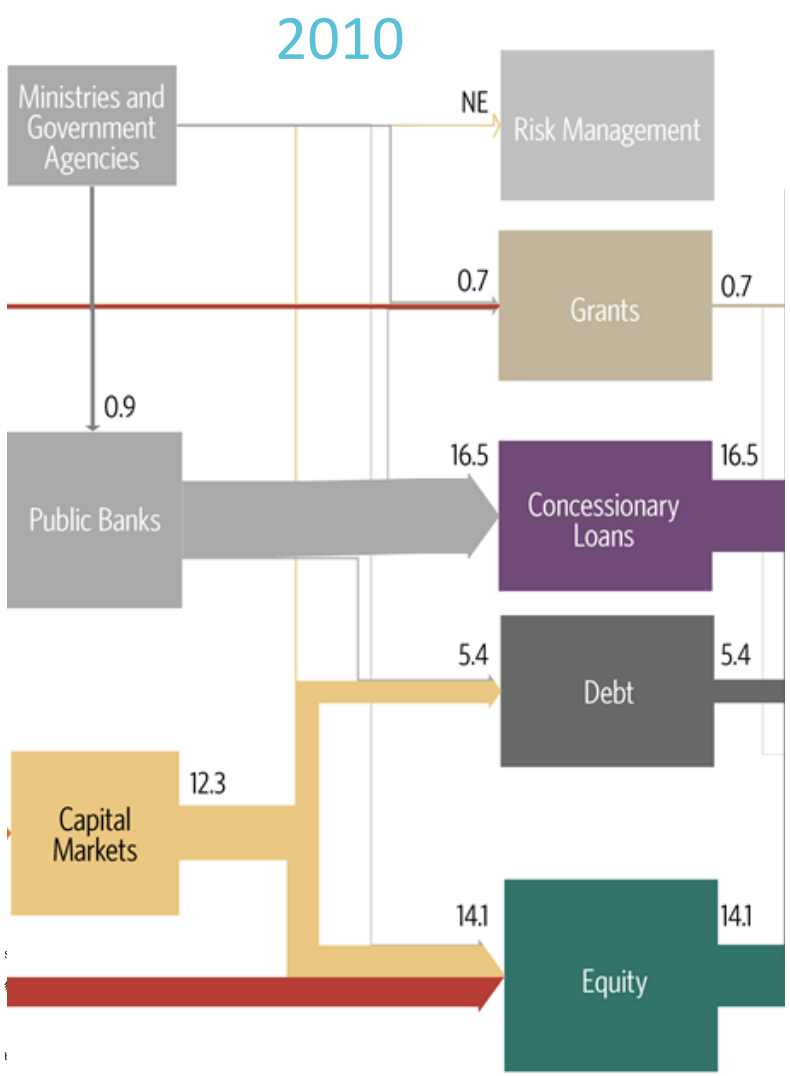
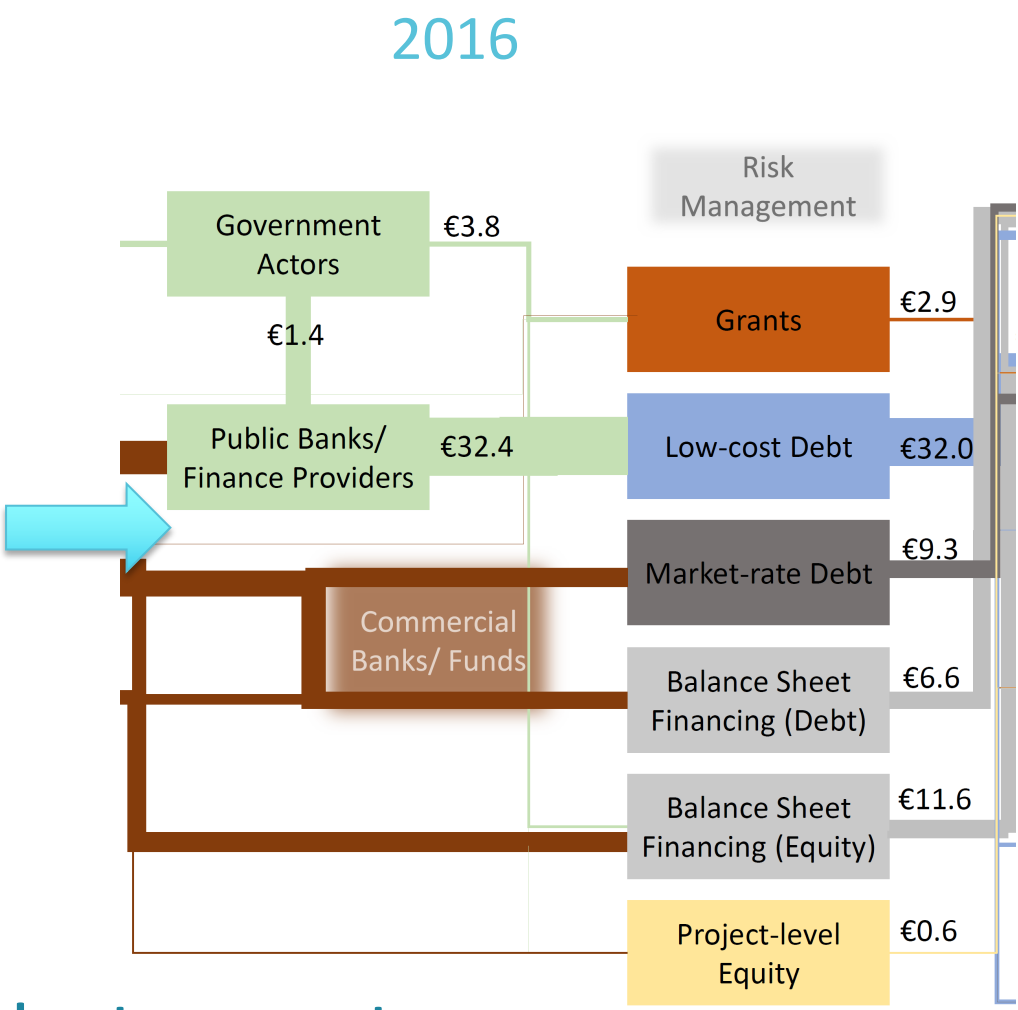
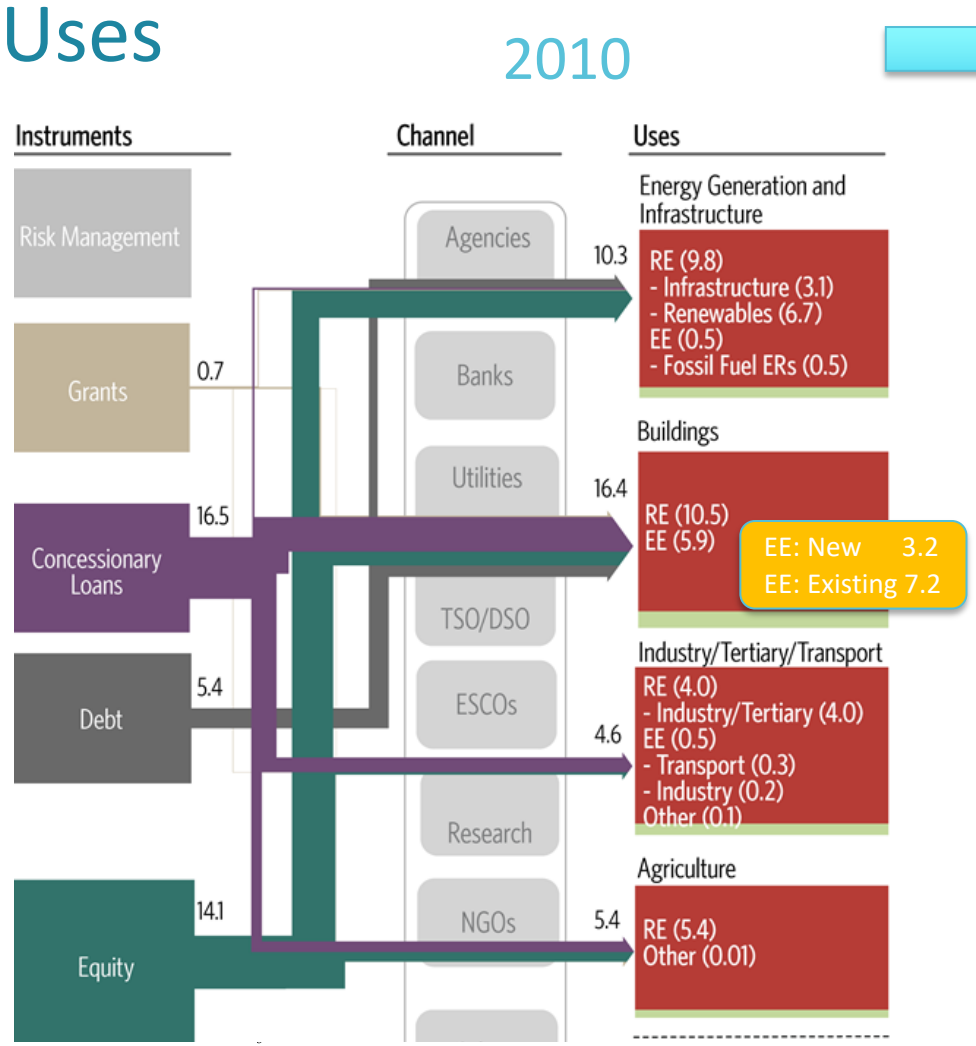

2010
Public
Budget
Ministries and Government Agencies
NE
ETS Revenues
Inflow FDI
Inflow EU Budget
0.2
0.9
Public Banks
1.8
Corporate
Energy
Industry/Tertiary
Agriculture
Other
18.8
NE
Philanthropy
NE
NE
13.9
Households
Private
9.3
Capital Markets
12.3
2016
Public Budget
€3.3
Government Actors
€3.8
€1.4
Inflow: EU Budget
€1.9
Public Banks/ Finance Providers
€32.4
Corporate
€35.7
Households
€18.3
Commercial Banks/ Funds
Sources and Intermediaries

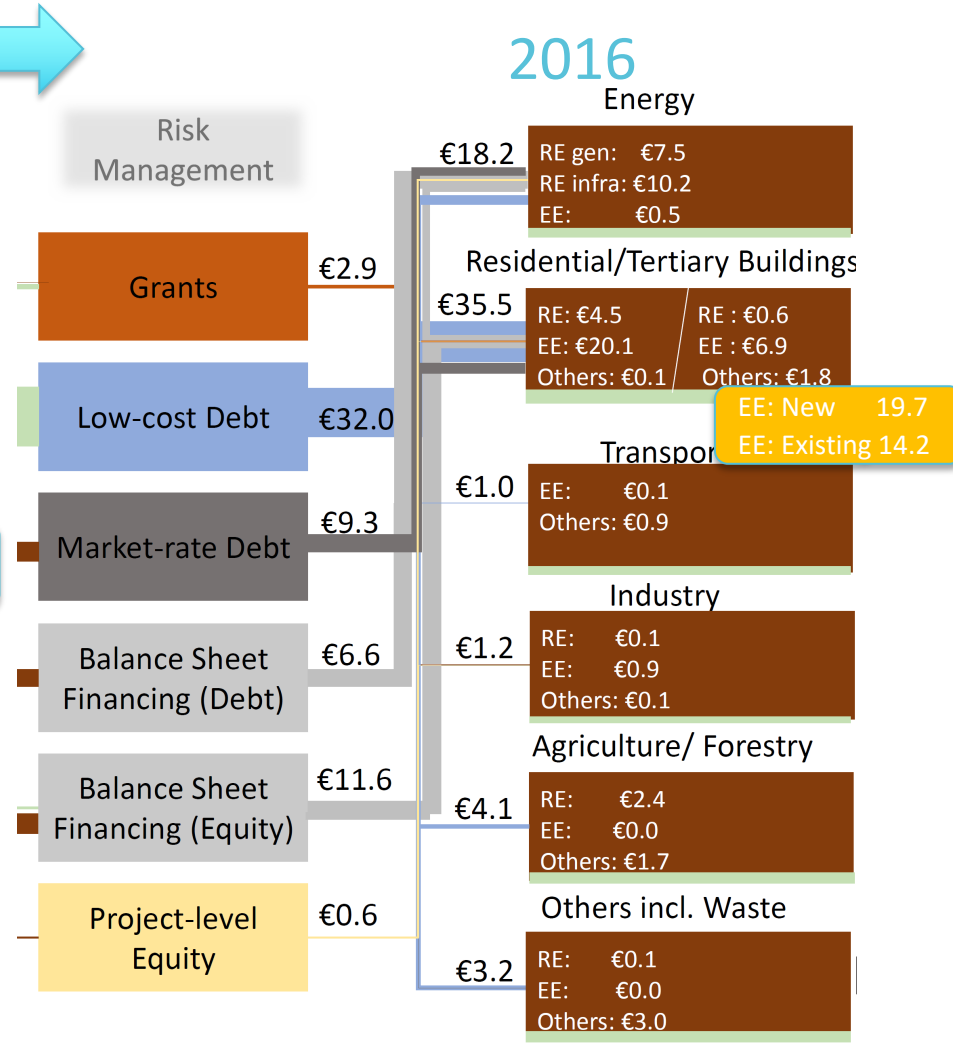




Instruments

Uses


2010
Instruments
Channel
Uses
Risk Management
Grants
0.7
Concessionary Loans
16.5
Debt
5.4
Equity
14.1
Agencies
Banks
Utilities
TSO/DSO
ESCOs
Research
NGOs
Energy Generation and Infrastructure
10.3
RE (9.8)
- Infrastructure (3.1)
- Renewables (6.7)
EE (0.5)
- Fossil Fuel ERs (0.5)
Buildings
16.4
RE (10.5)
EE (5.9)
EE: New 3.2
EE: Existing 7.2
Industry/Tertiary/Transport
4.6
RE (4.0)
- Industry/Tertiary (4.0)
EE (0.5)
- Transport (0.3)
- Industry (0.2)
Other (0.1)
Agriculture
5.4
RE (5.4)
Other (0.01)


2016
Risk Management
Grants
€2.9
Low-cost Debt
€32.0
Market-rate Debt
€9.3
Balance Sheet Financing (Debt)
€6.6
Balance Sheet Financing (Equity)
€11.6
Project-level Equity
€0.6
Energy
€18.2
RE gen: €7.5
RE infra: €10.2
EE: €0.5
Residential/Tertiary Buildings
€35.5
RE: €4.5
EE: €20.1
Others: €0.1
RE : €0.6
EE : €6.9
Others: €1.8
EE: New 19.7
EE: Existing 14.2
Transpor
€1.0
EE: €0.1
Others: €0.9
Industry
€1.2
RE: €0.1
EE: €0.9
Others: €0.1
Agriculture/ Forestry
€4.1
RE: €2.4
EE: €0.0
Others: €1.7
Others incl. Waste
€3.2
RE: €0.1
EE: €0.0
Others: €3.0

Discussion points

- Map concept:
  - Sources, intermediaries, instruments, sectors and their segments
- Map elements:
  - Sources, intermediaries, instruments, sectors and their segments
- Sectoral scope – mitigation:
  - Energy generation and grid, industry, buildings, transport, agriculture
- Measures:
  - Climate-specific investment vs. climate-related
  - Tangible vs intangible
- Cost definition:
  - Incremental vs. total capital investment

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