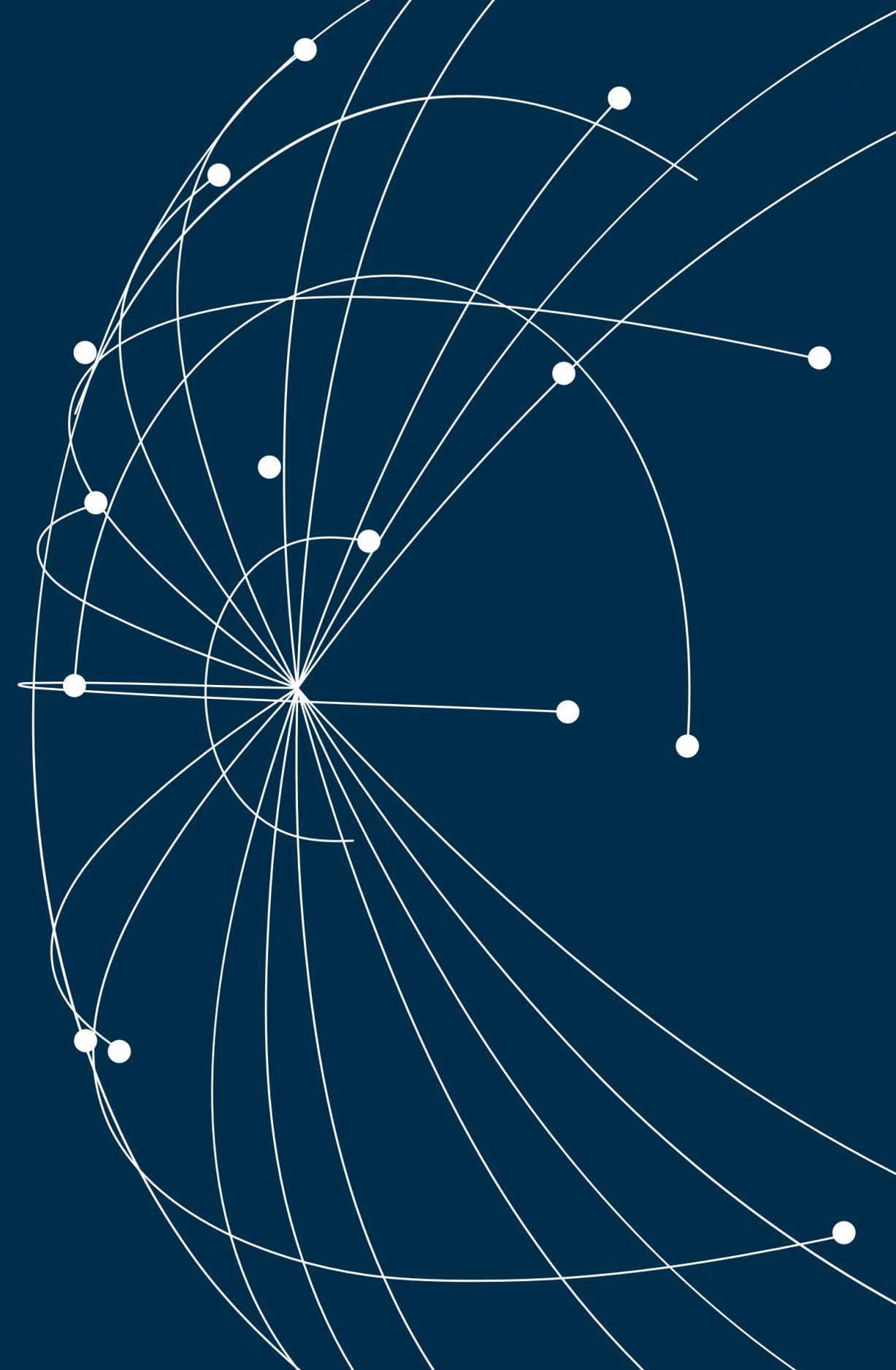

INVESTING IN TRANSFORMATION

FROM PUBLIC COMMITMENTS TO PRIVATE CAPEX

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CORE THESIS



Private investors respond to fiscal policy **signals**, not just fiscal policy volumes.
When commitment is withdrawn, private green investment contracts rapidly and disproportionately.

THE EVENT

Nov 2023: Constitutional Court slashes Climate Fund from €103 bn to €43 bn

THE IMPACT

Green investment score drops 19%;
green share of total CapEx falls 34%

THE INSIGHT

This was a credibility shock, not a liquidity shock –
firms retained full capital access

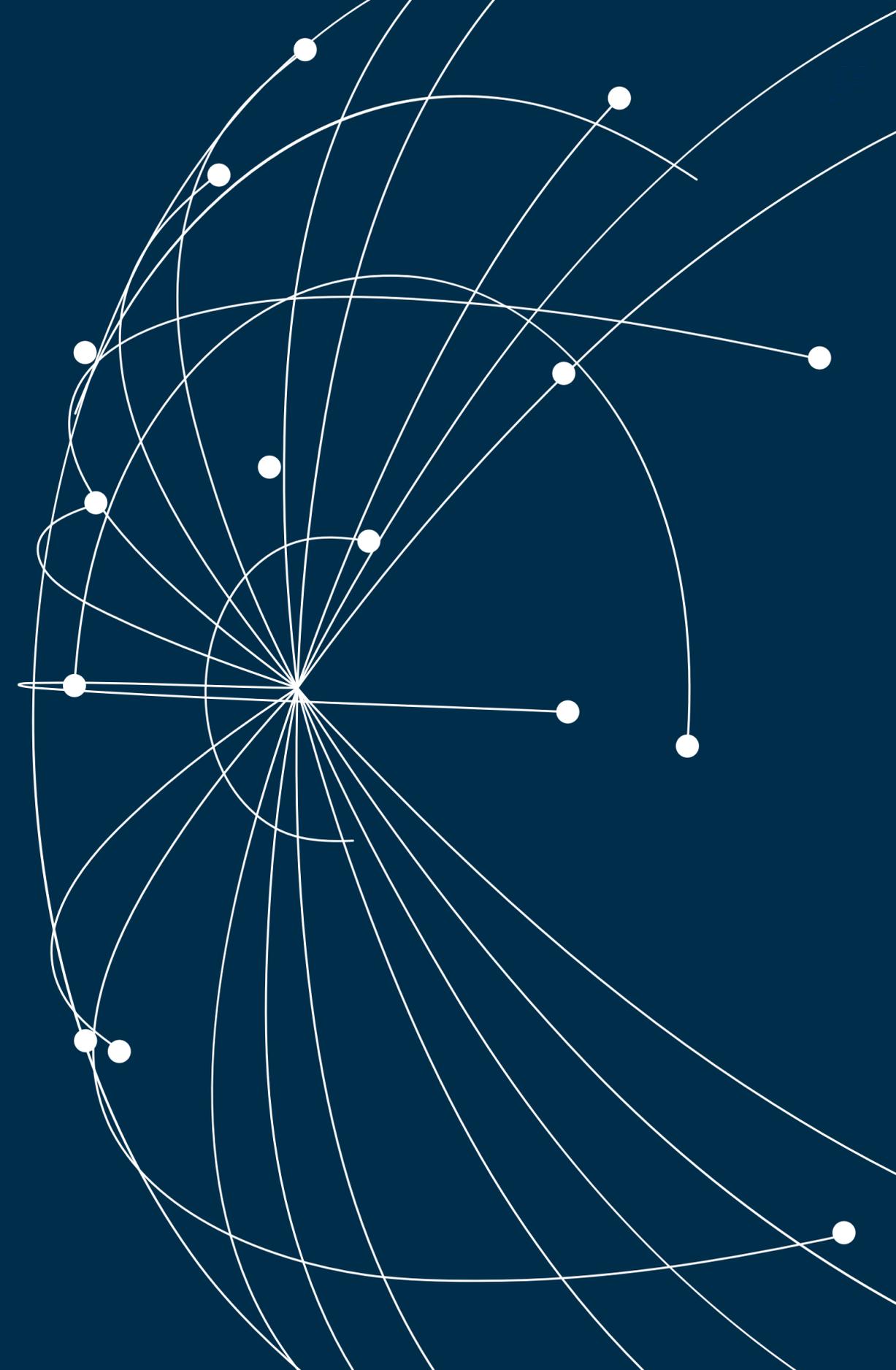
TODAY'S TALK

- 1 How we measure investment expectations in real-time
- 2 What happened when public commitment was withdrawn
- 3 What this means for policy design

PART 1

HOW WE MEASURE PRIVATE INVESTMENT EXPECTATIONS

A NOVEL AI-BASED, REAL-TIME INDICATOR FROM CEO EARNINGS CALLS



AI-BASED CAPEX INVESTMENT SCORE



REAL-TIME FORWARD-LOOKING INDICATOR FROM CEO EARNINGS CALLS

METHODOLOGY

- Earnings calls of all German listed firms
- 2015Q2 – 2025Q3 | about 4,130 firm-quarter observations
- GPT 4.1 Mini classifies CEO investment intentions
- 5-point scale: "Increase substantially" to "Decrease substantially"

VALIDATION

- Correlation with ifo Business Climate Index = 0.659
- Tracks German Industrial Production ($r = 0.545$)
- Advantage: revealed preferences, not survey responses



AI PROMPT TO LLM

"Over the next year, how will the firm's capital spending (capex) change?"

↑ Increase substantially

↗ Increase

→ No change / No info

↘ Decrease

↓ Decrease substantially

CAPEX INVESTMENT SCORE GERMANY



MARKETS CAN LEARN FROM CEO EXPECTATIONS ABOUT FUTURE INVESTMENTS

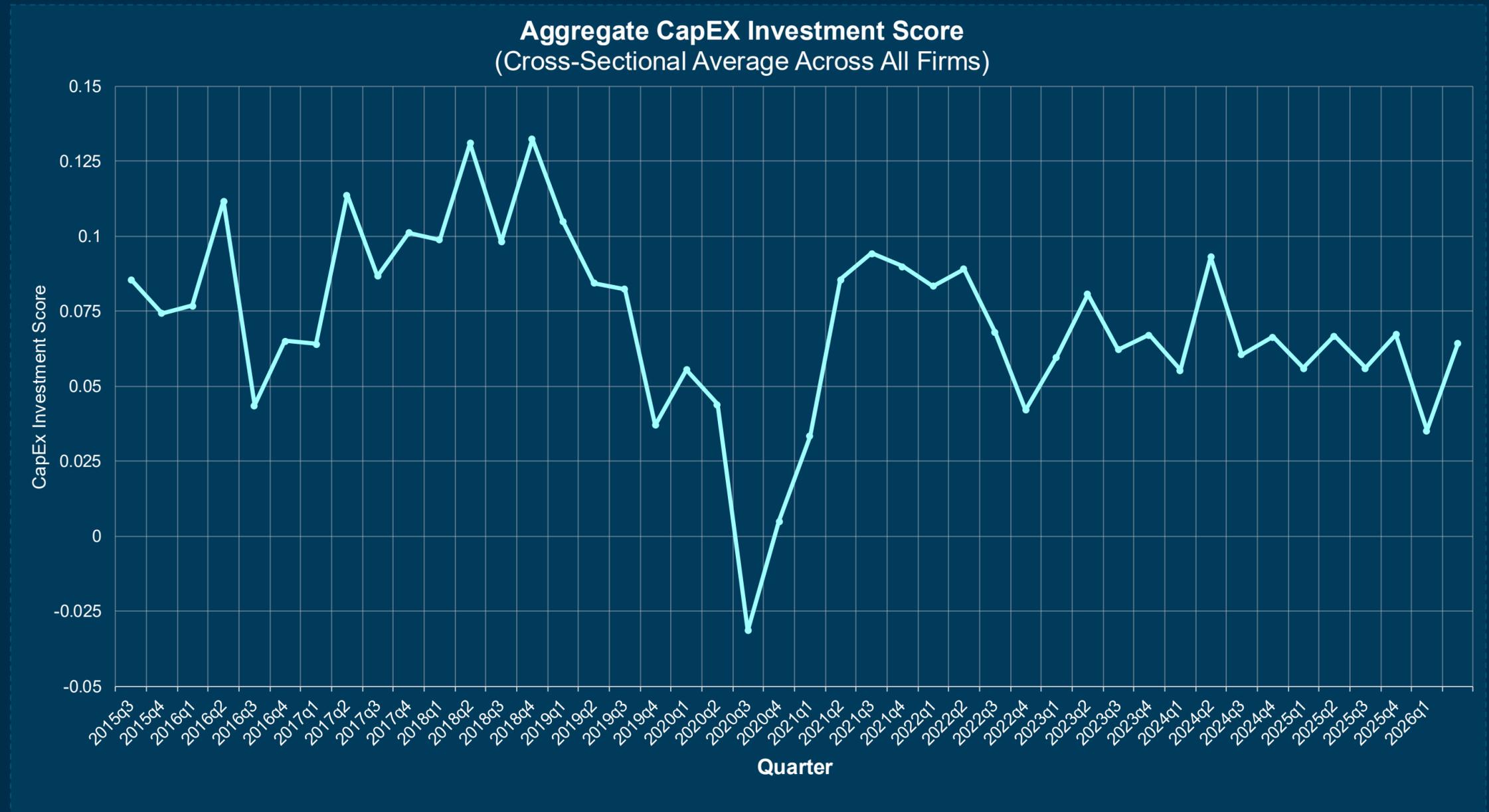
12-MONTHS CAPEX EXPECTATIONS OF GERMAN CEOs

0.7

Correlation with ifo Index

KEY FACTS

- Bottom-up CapEx score (from firm-level)
- Predict future investments and stock prices
- (Used to be) Driven by CEO sentiment



MEASURING GREEN INVESTMENT



NESTED AI MODEL IDENTIFIES GREEN TRANSFORMATION INVESTMENTS FROM EARNINGS CALLS

1 EXTRACT TEXT CHUNKS

>20,000 text chunks from earnings calls where CEOs discuss investment plans

2 APPLY GREEN KEYWORDS

117 keywords across 15 categories: renewables, electrification, hydrogen, circular economy, etc.

3 COMPUTE GREEN SHARE

Green investment as % of total CapEx announcements.
Nested: conditioned on CapEx Score $\neq 0$

13.3%

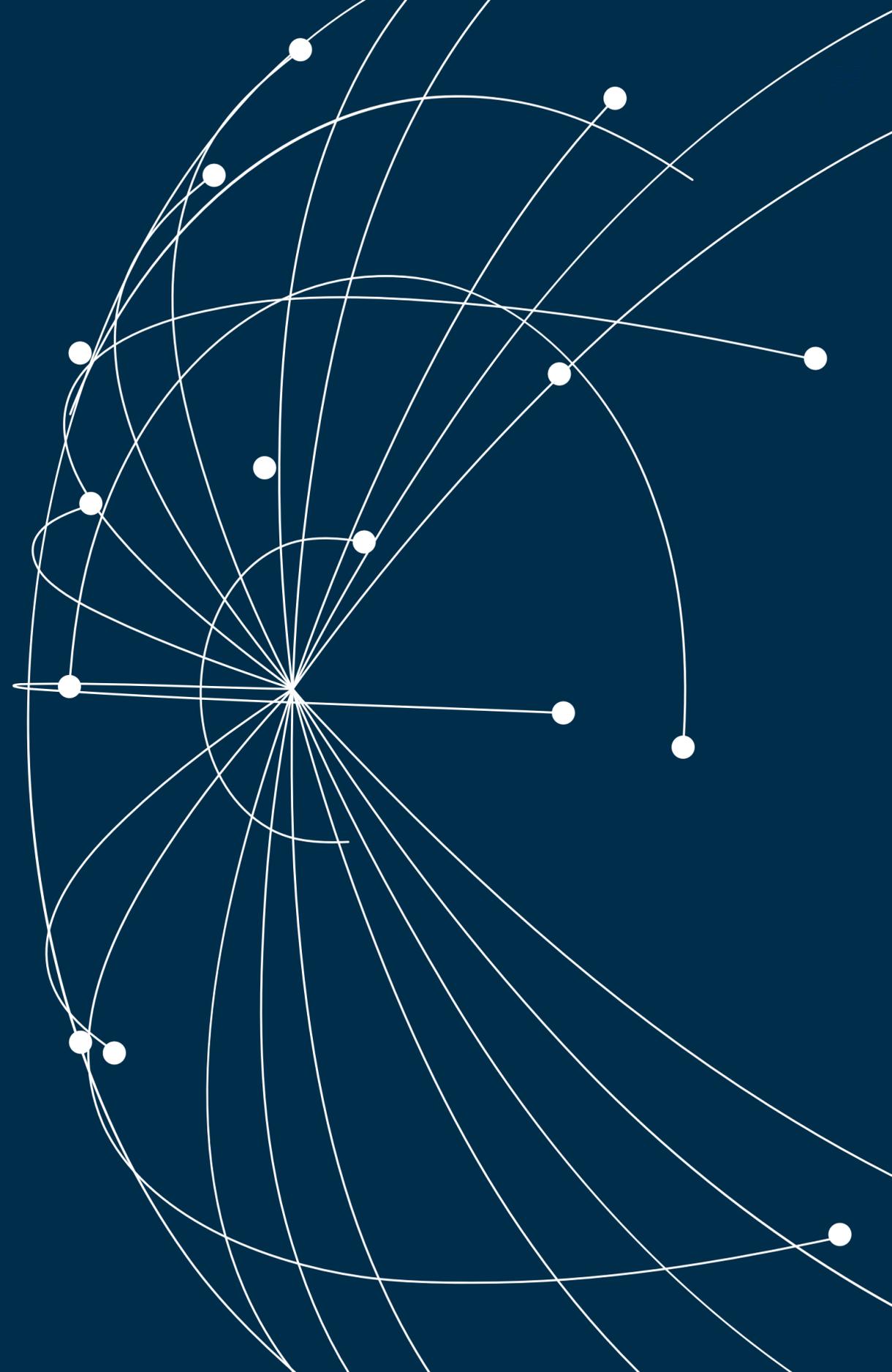
Average green share of total CapEx announcements

Pre-ruling trend: Green Share rose from near-zero (2015) to >20% by Q3 2023 – a firmly positive trajectory

PART 2

THE NATURAL EXPERIMENT

WHAT HAPPENED WHEN PUBLIC COMMITMENT
WAS ABRUPTLY WITHDRAWN?



THE SHOCK: NOVEMBER 15, 2023

GERMAN CONSTITUTIONAL COURT RULES €60BN REALLOCATION UNCONSTITUTIONAL

€103bn

€43bn

Climate Fund

WHAT HAPPENED

- Government had reallocated €60bn in unused pandemic funds to the Climate and Transformation Fund (KTF)
- Constitutional Court ruled this unconstitutional
- Fund slashed from €102.6bn to €42.6bn, i.e. two-thirds eliminated overnight
- **This was not a funding event for private firms – no firm lost access to capital markets**

THE SIGNAL *"Can we trust the government's transformation agenda?"*

GREEN INVESTMENT SCORE DROPS 19%



GREEN INVESTMENT DISPROPORTIONATELY HIT – ALREADY RELATIVE TO NON-GREEN INVESTMENTS

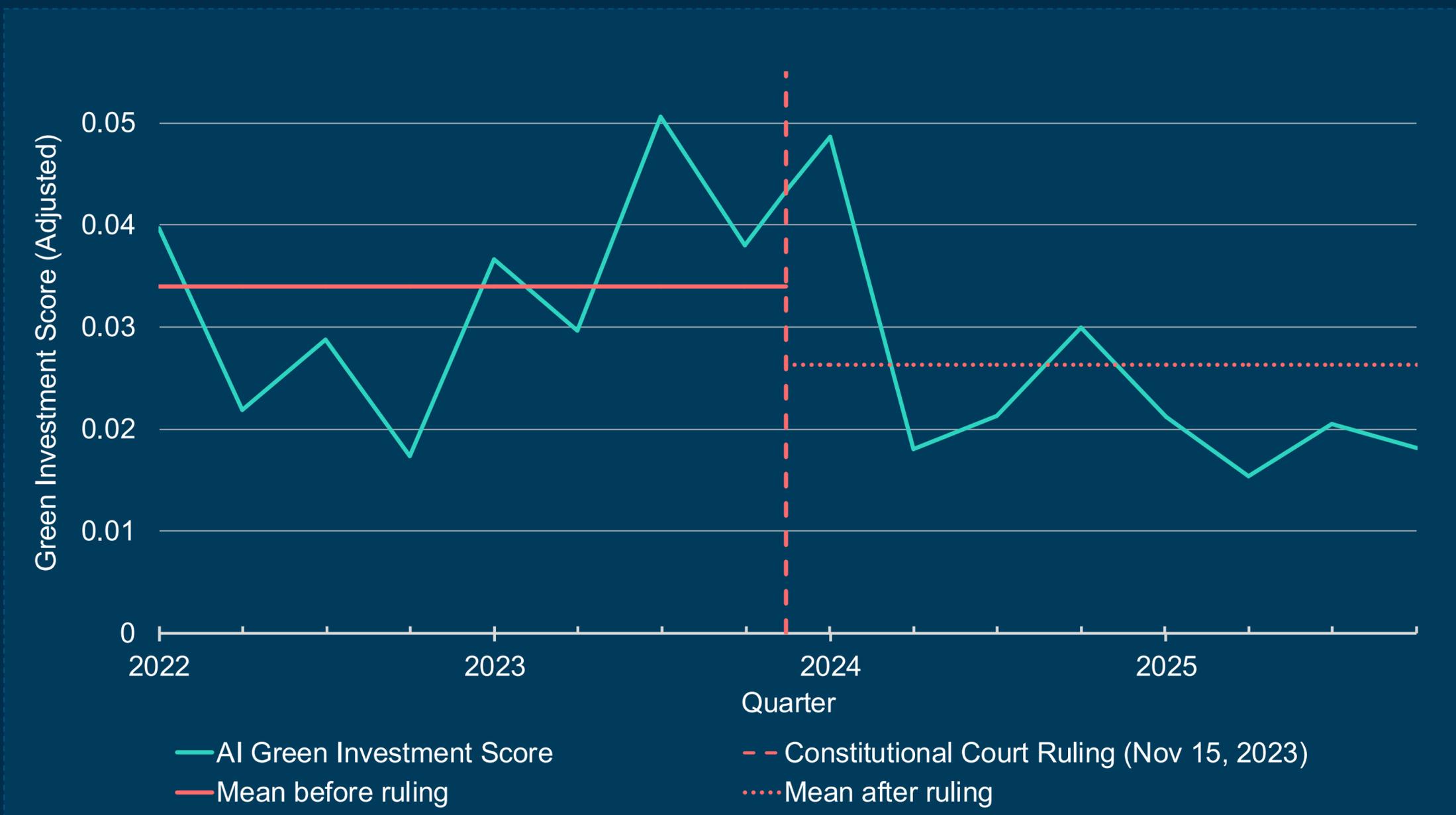
AI GREEN INVESTMENT SCORE

-19%

Green Investment Score

KEY FACTS

- Drop begins Q1 2024
- No recovery through Q3 2025
- Trend reversal after years of steady increase



GREEN SHARE OF CAPEX FALLS 34%



GREEN INVESTMENT DISPROPORTIONATELY HIT – ALREADY RELATIVE TO NON-GREEN INVESTMENTS

GREEN SHARE OF CAPEX INVESTMENTS

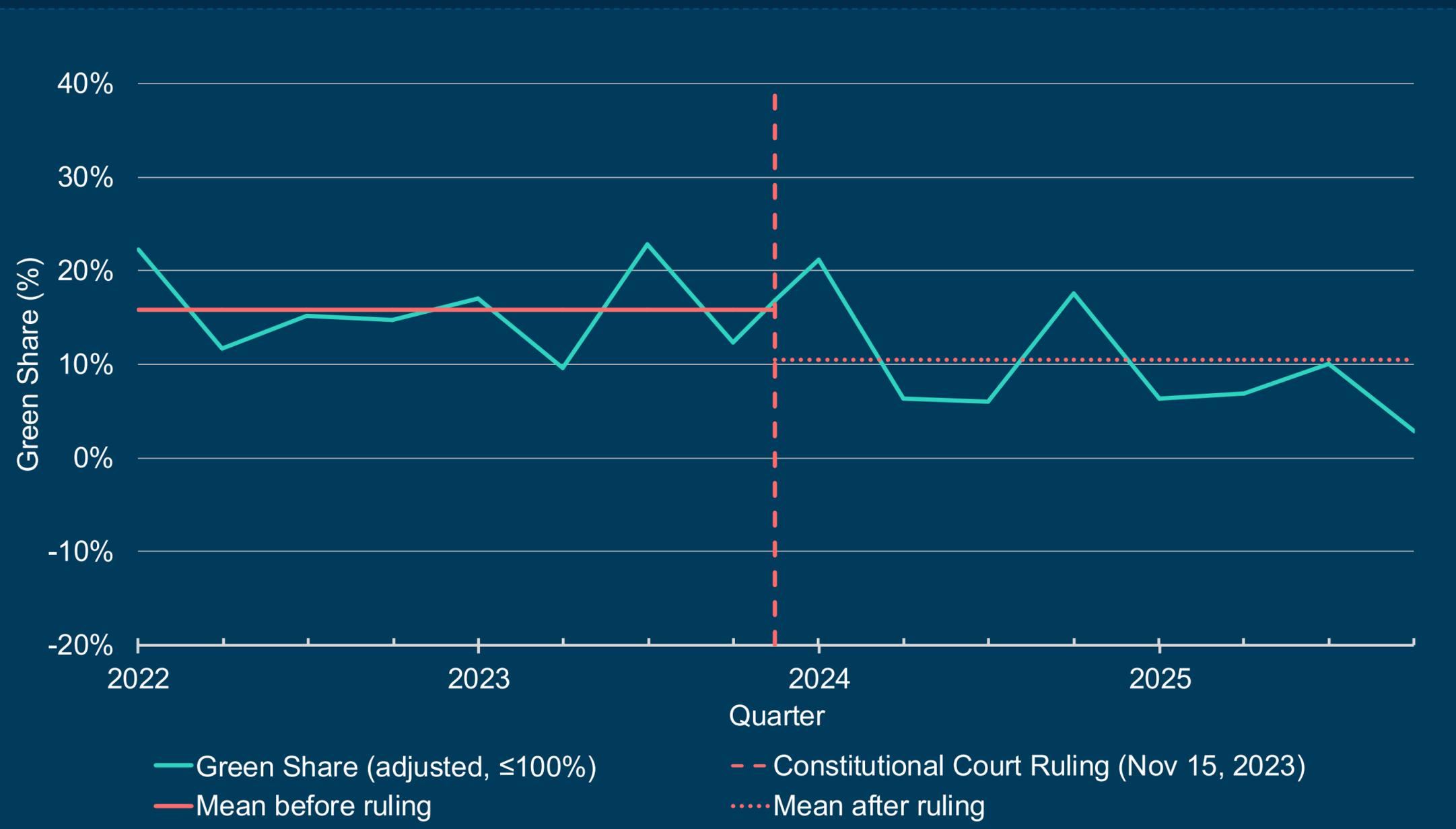
-5.36pp

-34%

Green Share of Total CapEx

INTERPRETATION

- 16% → 10.4% green share
- Decline is relative to non-green CapEx
- Green investment is disproportionately sensitive to policy shocks



A CREDIBILITY SHOCK, NOT A LIQUIDITY SHOCK



WHY THE DROP IS SPECIFIC TO GREEN – AND WHAT IT REVEALS ABOUT THE TRANSMISSION CHANNEL

EVIDENCE

- Overall CapEx continued at moderate levels, the drop is specific to green investment
- Correlation between overall and green investment: $r = 0.12$ (statistically insignificant, $p = 0.44$)
- German firms retained full access to equity and credit markets

RISK REPRICING

Unreliable government commitment raises transformation risk → higher hurdle rates → fewer investments

REGULATORY UNCERTAINTY

Long-term investments (5–10 yr payback) become unfinanceable if policy can be reversed

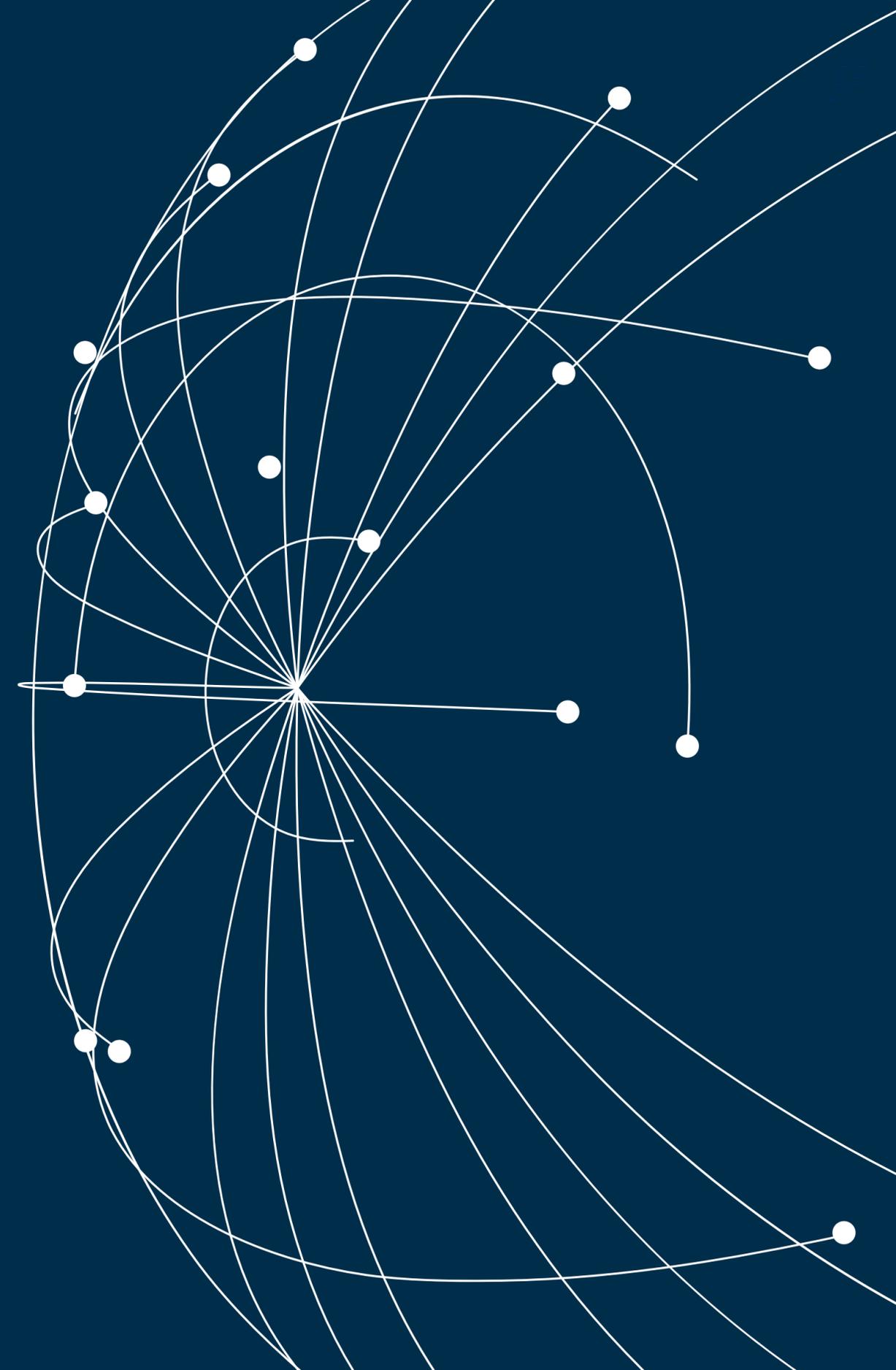
SIGNALING EFFECT

The ruling signaled "transformation is not a credible priority" (even though €42.6bn remained)

PART 3

POLICY IMPLICATIONS

THE COST OF BEING UNPREDICTABLE –
AND WHAT IT TAKES TO FIX IT



CREDIBILITY IS INFRASTRUCTURE



NOT JUST MORE PUBLIC MONEY – BUT COMMITMENT THAT CAN BE MONITORED AND PRICED

TRADITIONAL VIEW

"To mobilize private capital, the state must provide co-financing, subsidies, or guarantees."

OUR FINDING

"Firms price commitment credibility directly into investments. Withdrawal risk is as damaging as initial absence and creates fragility."

COMMITMENT IS A TECHNOLOGY PROBLEM

- The analogy is monetary policy: central banks achieve time-consistency through institutional design and explicit mandates
- Transformation policy needs a similar architecture: binding multi-year commitments, protected budget lines, explicit reversal costs

COMMITMENTS MUST BE MONITORED

- Firms had no early warning signal the commitment was legally vulnerable
- The Transformation Investment Compass makes commitment publicly accountable
- Falling private investment might be a visible, early signal of credibility failure

POLICY SHOULD MATCH THE INVESTMENT STRUCTURE

- Investments are highly concentrated: largest firms drive the aggregate
- Small firms might be systematically under-investing (relative to their balance sheets)
- Broad subsidy measures miss this point entirely