

Innovation  
Hub



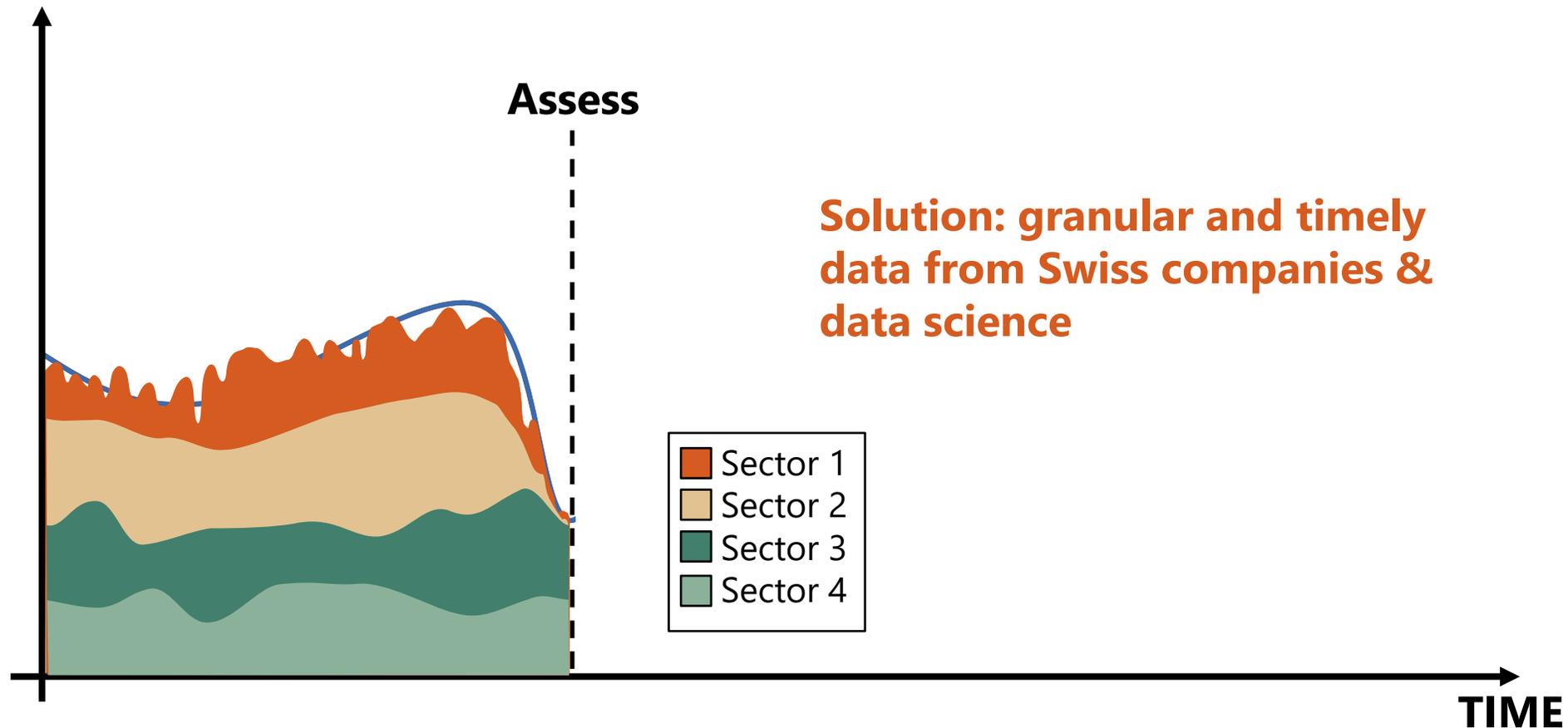
## Project Neo

4th IFC-BoI workshop on "Data science in central banking", 18-20 Feb 2025

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DISCLAIMER: The views are those of the presenter and not necessarily those of the BIS nor those of the SNB.

## Problem statement



# Objectives

Extract value from  
granular data



Comparable to  
official statistics



To monitor  
individually and  
use in models

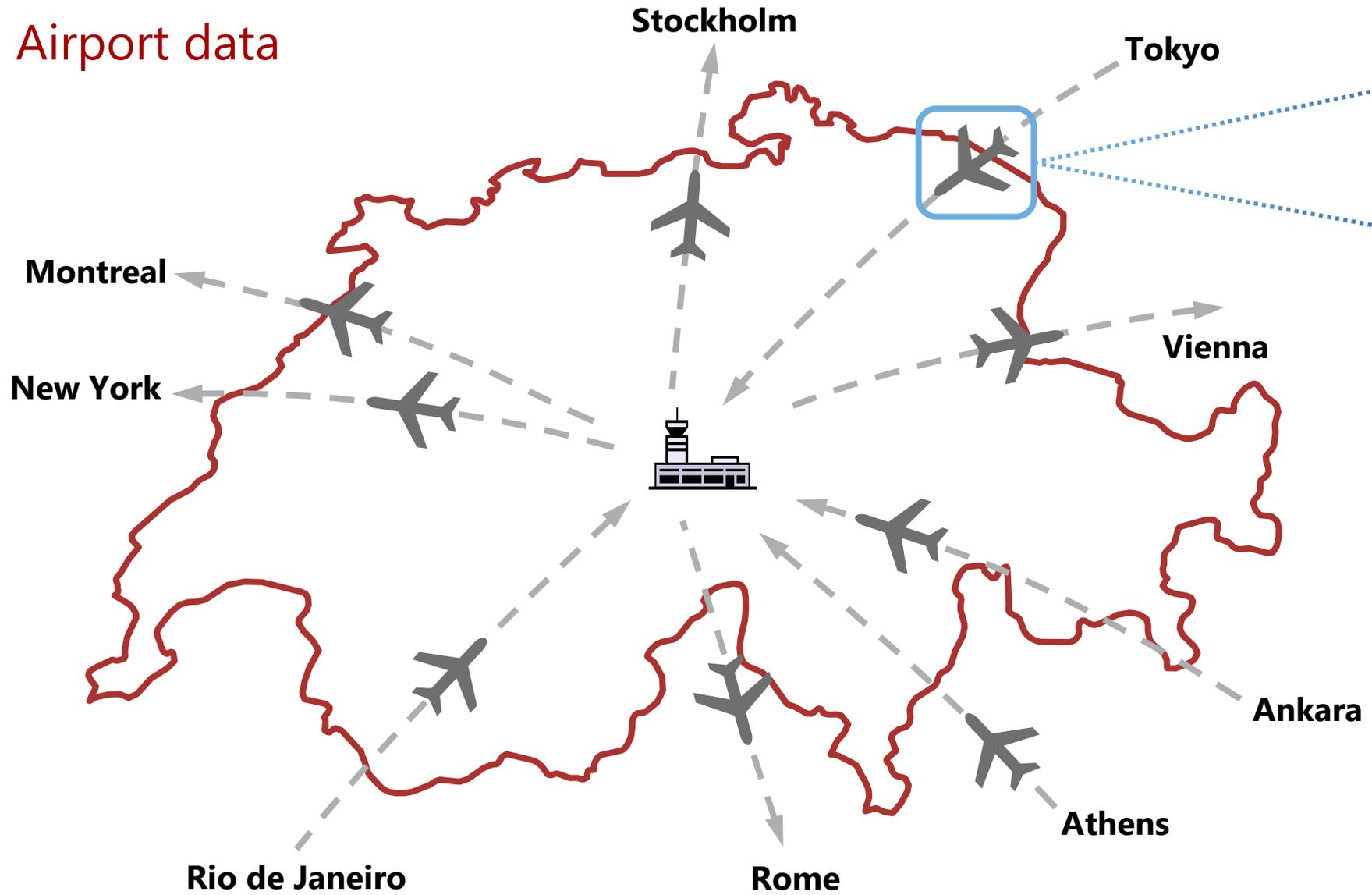


## Economic monitoring

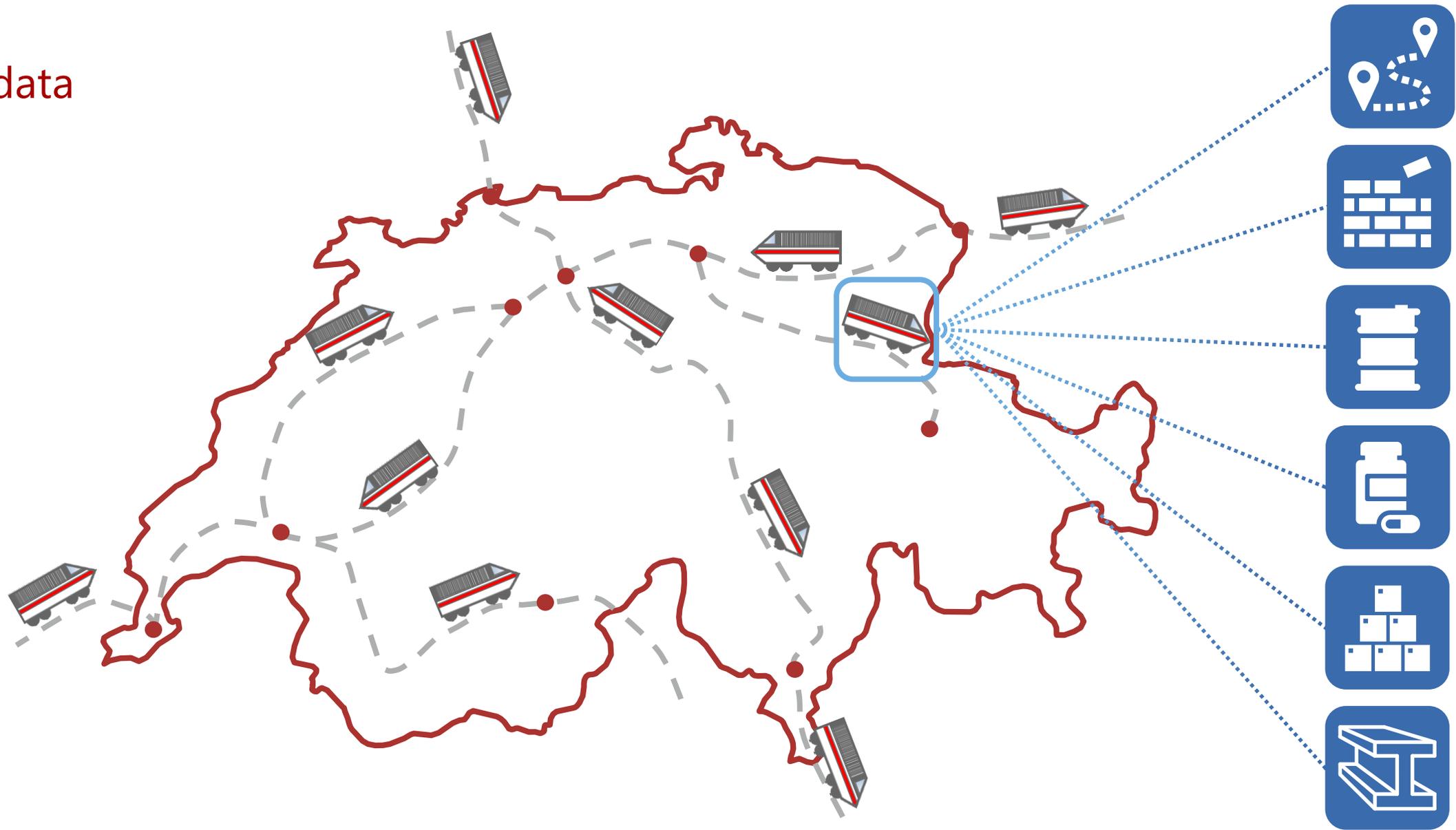
Can we create  
indicators directly  
interpretable?

1

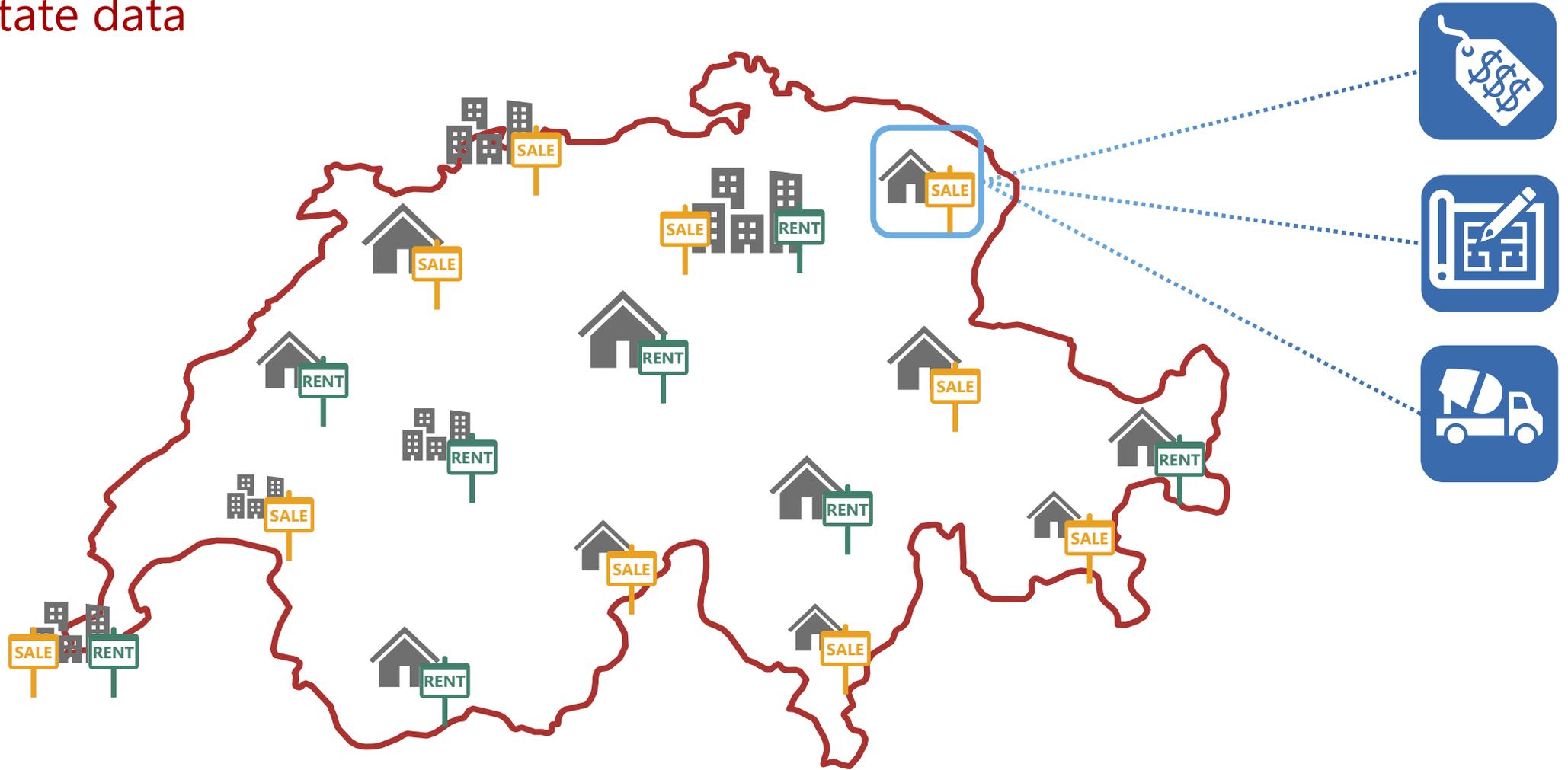
# Zürich Airport data



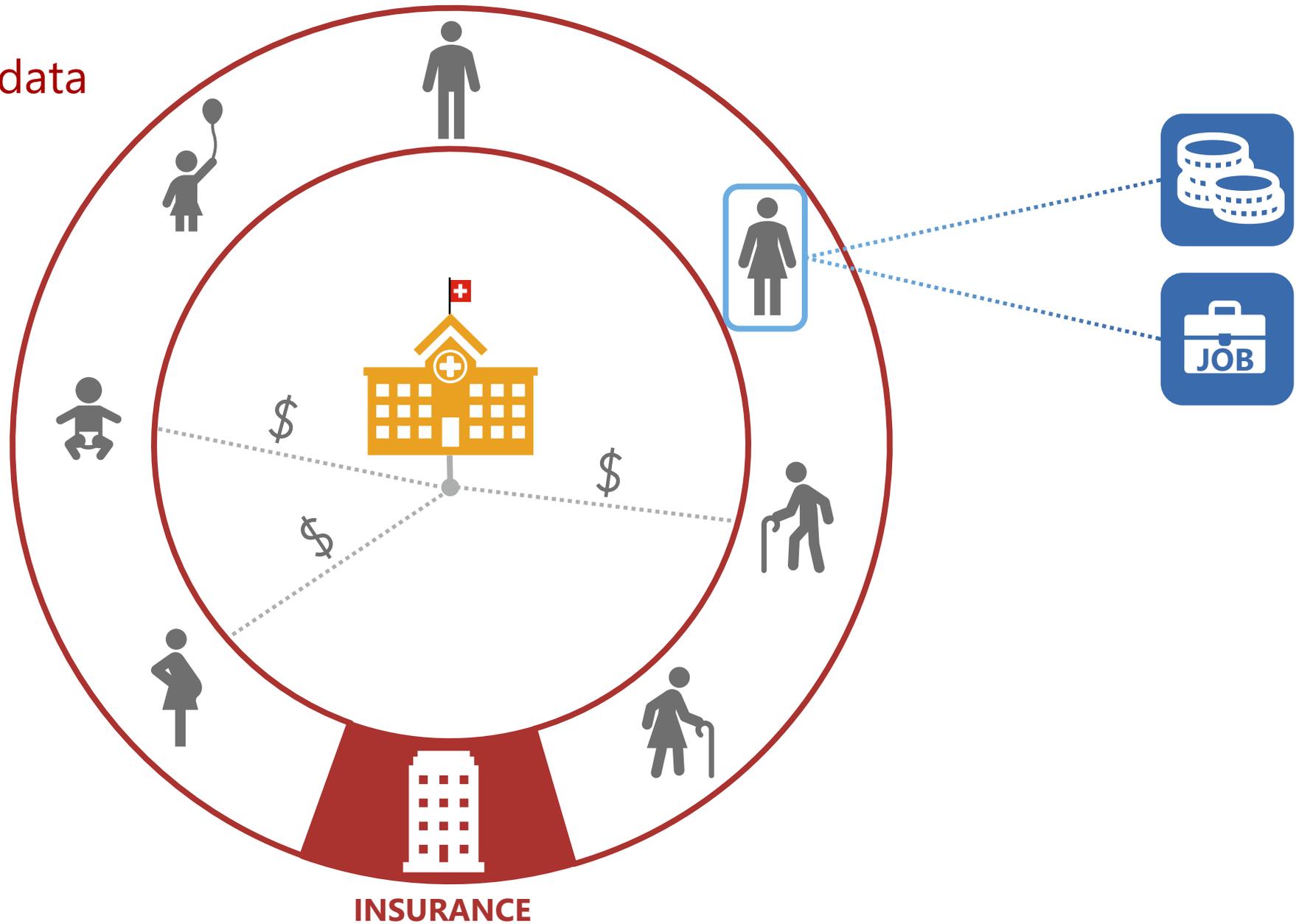
# Rail data



# Real estate data



# Health insurance data



And other datasets...





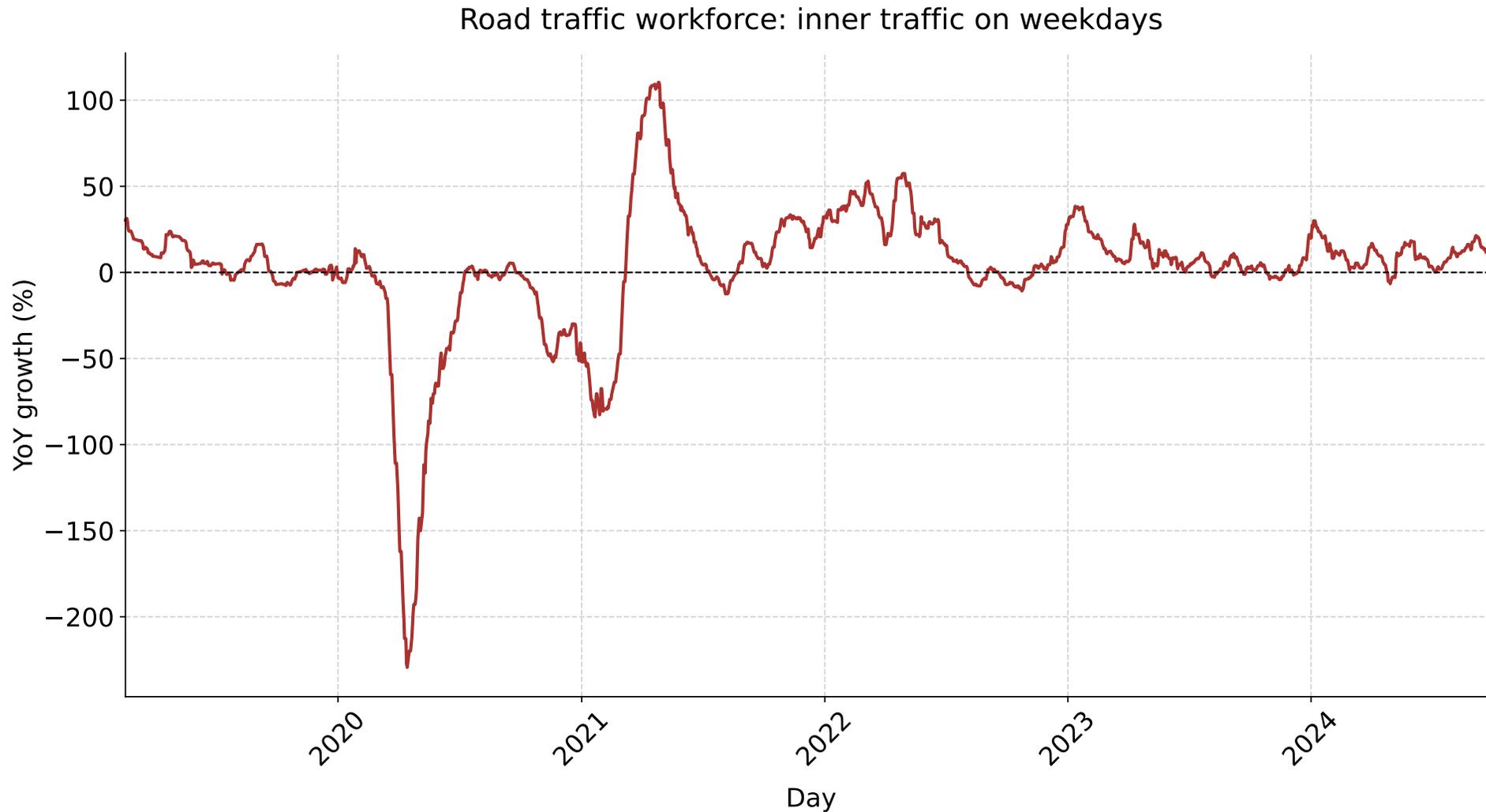
**Demo**



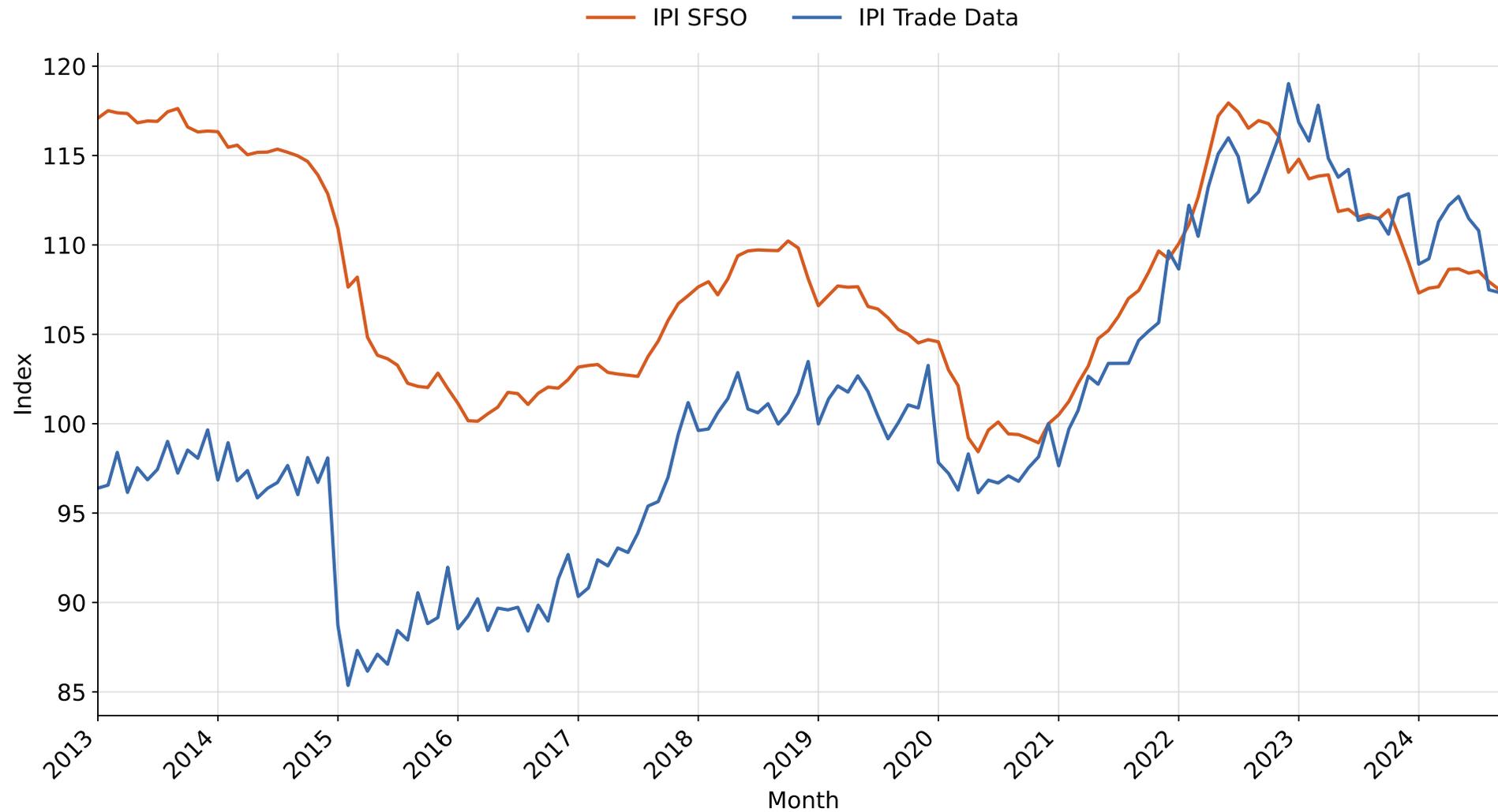


# Appendix

## Example of features engineering not suitable for economic indicators



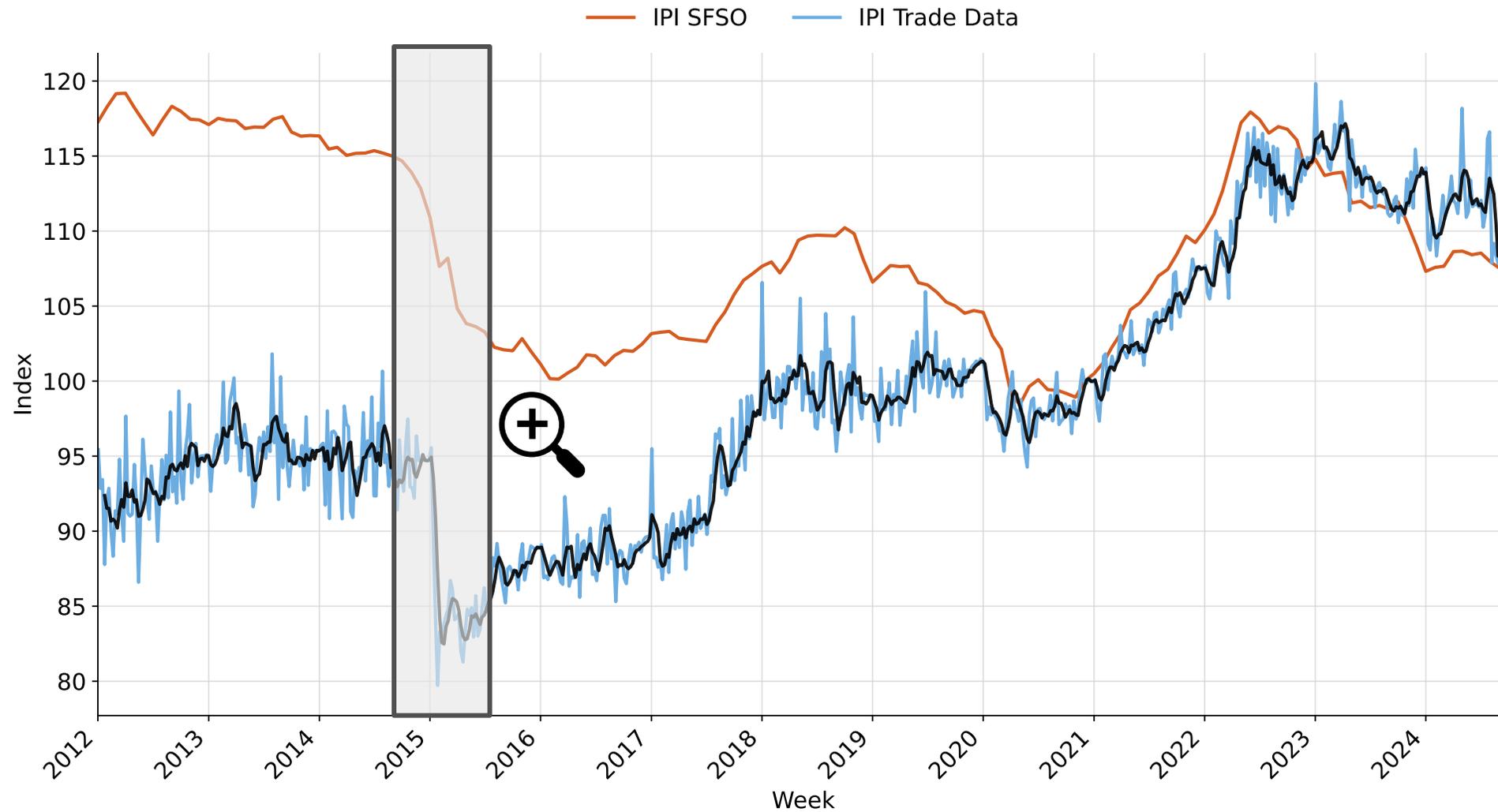
## Economic indicator: Import Price Index (IPI) using trade data



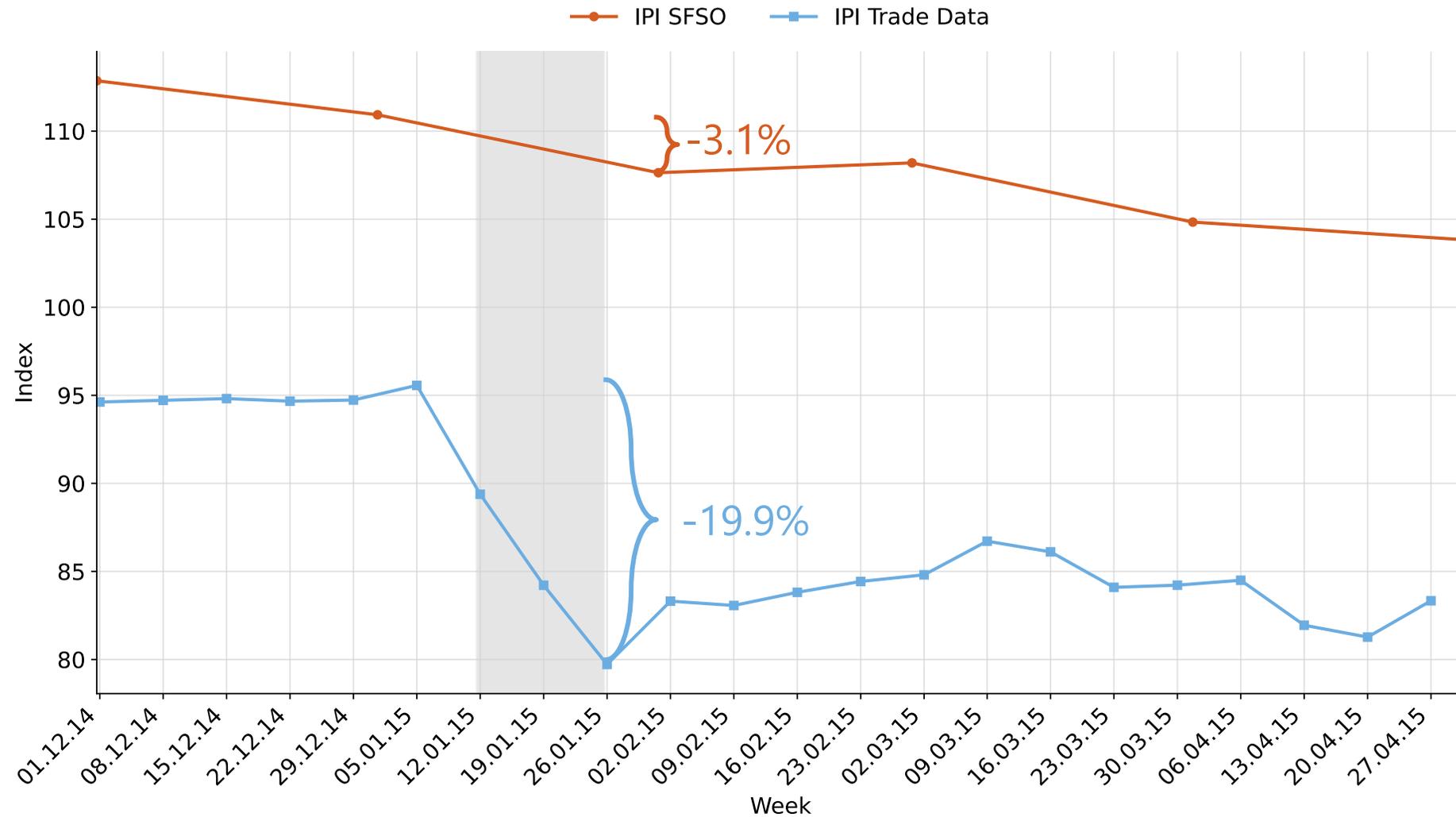
## Why is trade IPI useful?

Official IPI	Trade IPI
<p>Measure the prices of carefully chosen imported items, constant over time</p>	<p>Official IPI is the "truth" → <b>Noisy signal</b> of official IPI</p>
<p>Monthly frequency and published on the 3<sup>rd</sup> week of following month</p>	<p>Weekly frequency with 2-week lag → <b>Available</b> up to <b>5 weeks earlier</b></p>
<p>Use surveys and other estimations to measure prices that takes time</p>	<p>Use directly the full population of paid imported prices → <b>Leading</b> official IPI <b>by ~3 months</b></p>
<p>Some sub-indices are published and no particular link to CPI</p>	<p>Any granularity sub-indices or export indices can be built → related to and <b>leading CPI</b></p>

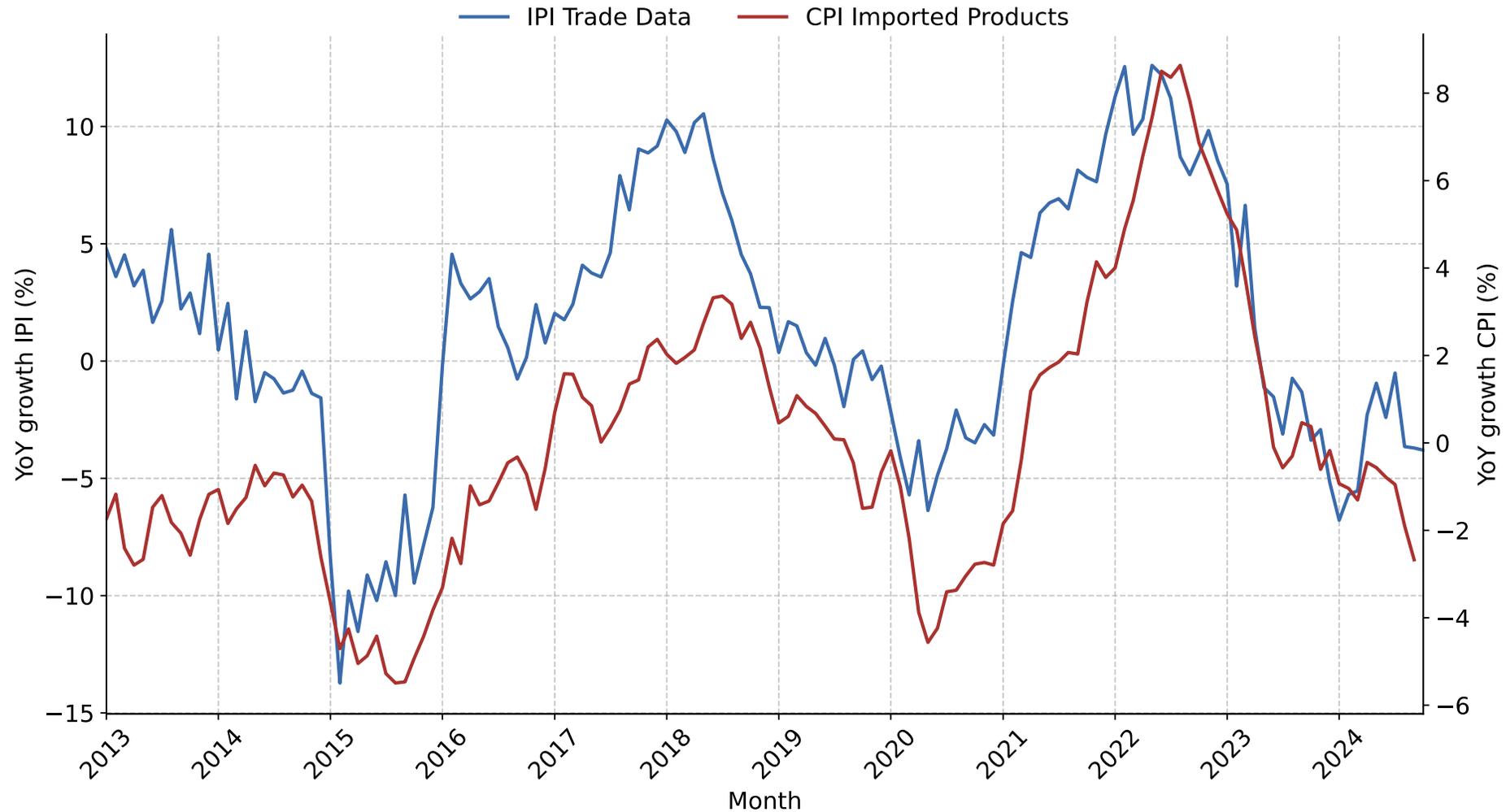
## Trade IPI: early weekly noisy signal leading official IPI



## Zooming in on the discontinuation of the minimum CHF/EUR exchange rate



## Leading imported goods CPI by 2 months & 0.8 correlation



# Pipeline

