COVID-19

Crisis Impact Prediction and Simulation
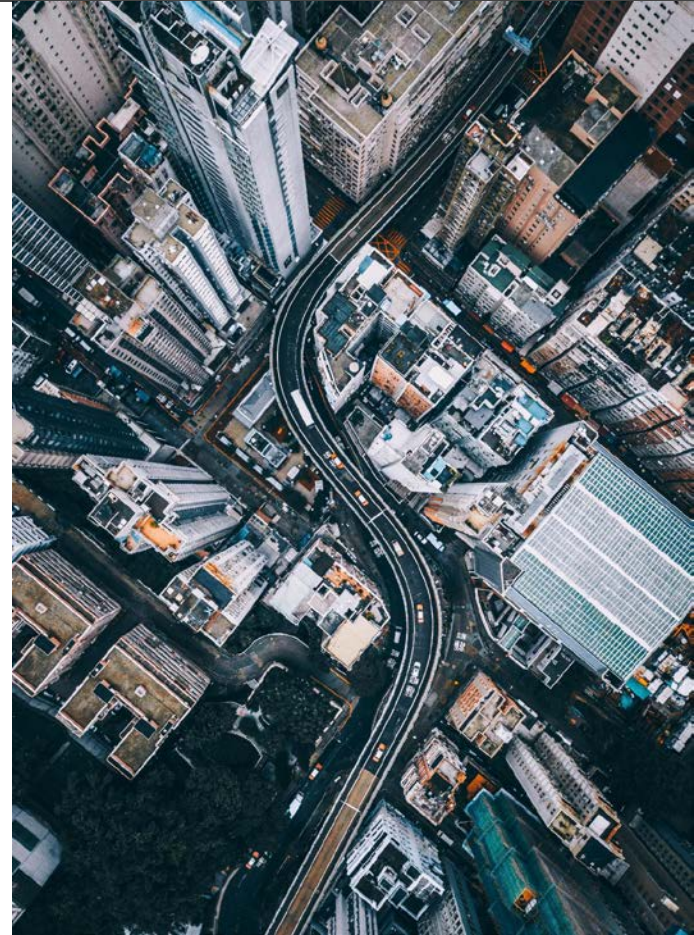
pwc

May 2020

Topics we will cover today

1. **Introduction – Reto Brunner**

2. **Key topics – what our experts are saying**
   a. Scenarios & prediction – **Gori von Hirschhausen / Roland Werner**
   b. Initial situation and objective – **Philipp Appenzeller**
   c. Our solution – **Frauke Schleer-van Gellecom / Philipp Appenzeller**
   d. How to get started – **Maurice-Oliver Nipper**

3. **Q&A**
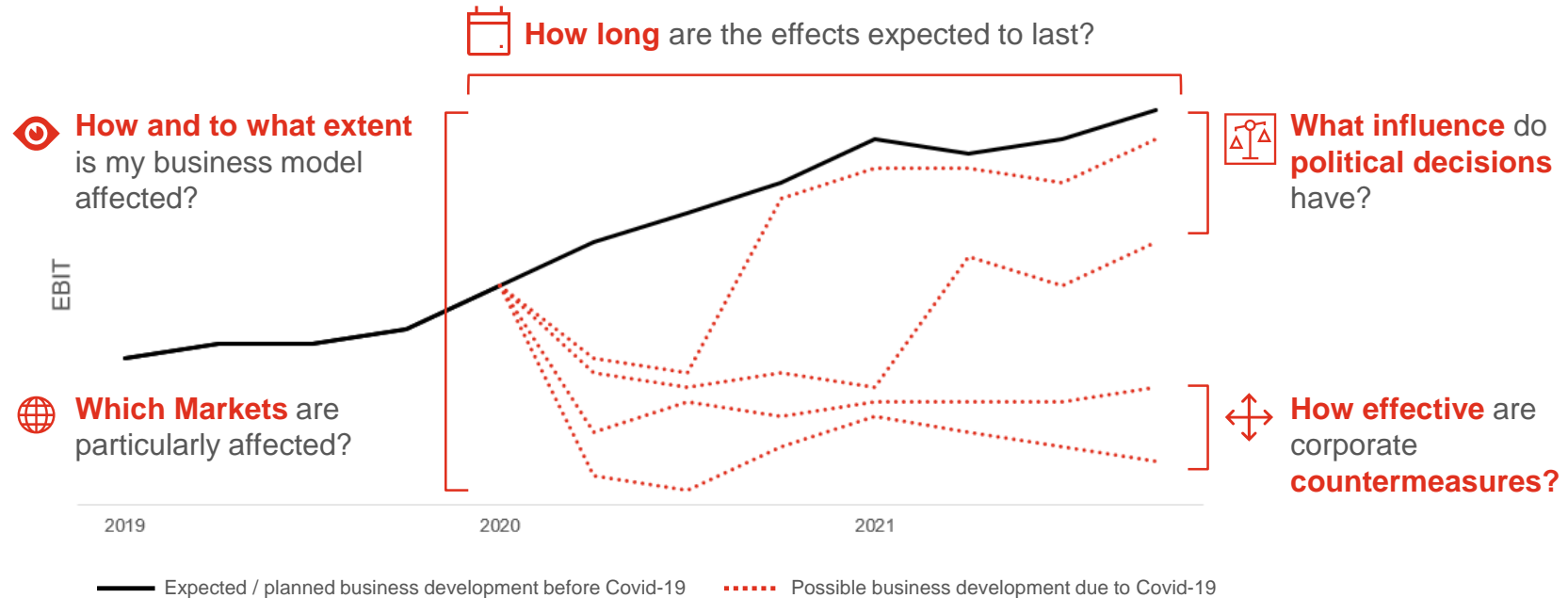
1

Initial situation & objective

Covid-19 considerably increases the uncertainty about future business development of companies

How long are the effects expected to last?

How and to what extent is my business model affected?

What influence do **political decisions** have?

Which Markets are particularly affected?

How effective are corporate **countermeasures?**

EBIT

2019   2020   2021

— Expected / planned business development before Covid-19   ······ Possible business development due to Covid-19

Impact Prediction & Simulation enables the definition and evaluation of scenarios for business development

	Scenario 1	EBIT effect	Scenario 2	EBIT effect
Expected effects on business development		50		50
Lockdown extension DE	✓		✓	
Sales slump 17% Europe	✓			
Factory closure Spain	✓		✓	
Relaunch Asia			✓	
Corporate countermeasures		29		22
Investment delay 1 year	✓		✓	
Introduction of short-time work	✓			
Tax deferral			✓	
Simulated outcome		41 -18%		34 -32%
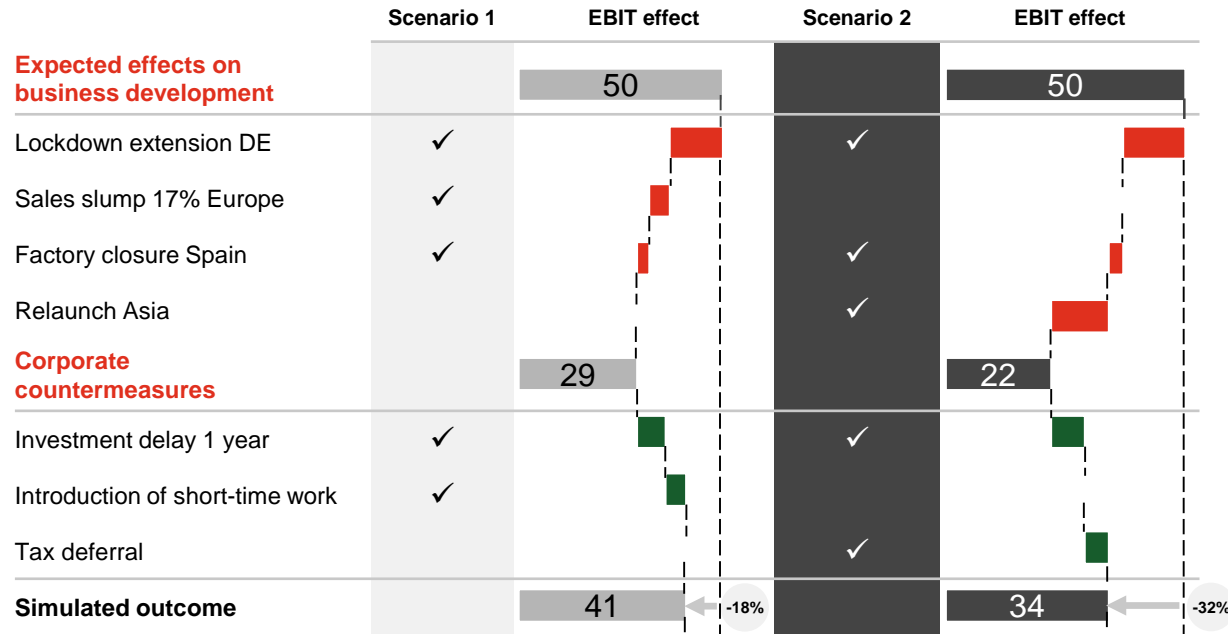
Objective Covid-19 Impact Prediction & Simulation:

- Flexible **combination** of possible **risks** and **countermeasures**
- **Automated** and **fast evaluation** of various factors along controlling KPIs (esp. operating result / liquidity)
- **Comparability** of possible **scenarios**
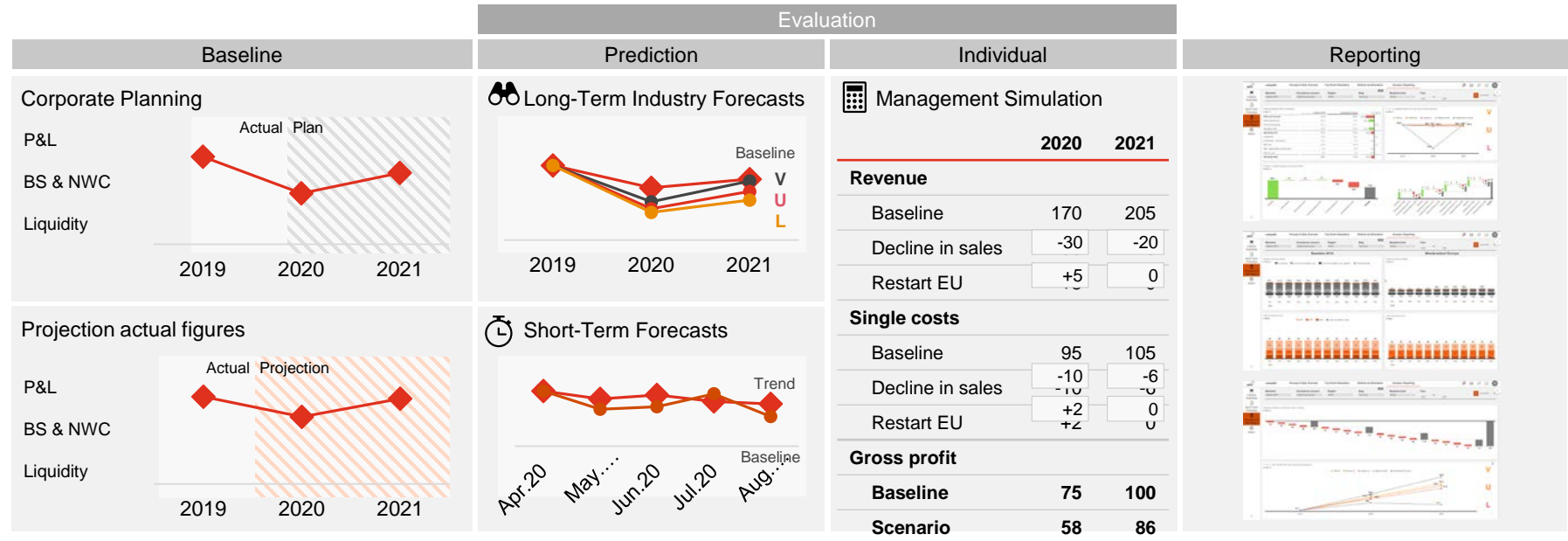- **Continuous updating** of scenarios and corresponding effects in **cooperation with the organization**

2

Our solution

Impact Prediction & Simulation offers a platform for scenario evaluation based on various methodological approaches

Overall workflow

	Evaluation		
Baseline	Prediction	Individual	Reporting

Corporate Planning

P&L

BS & NWC

Liquidity

Actual | Plan

2019 | 2020 | 2021

Projection actual figures

P&L

BS & NWC

Liquidity

Actual | Projection

2019 | 2020 | 2021

Long-Term Industry Forecasts

Baseline
V
U
L

2019 | 2020 | 2021

Short-Term Forecasts

Trend

Baseline

Apr.20 | May... | Jun.20 | Jul.20 | Aug...

Management Simulation

	2020	2021
Revenue		
Baseline	170	205
Decline in sales	-30	-20
Restart EU	+5	0
Single costs		
Baseline	95	105
Decline in sales	-10	-6
Restart EU	+2	0
Gross profit		
Baseline	**75**	**100**
Scenario	**58**	**86**

# Predictive Analytics can help to improve your decision-making

What Predictive Analytics is

- When done right: an optimal objective projection of the future based on all available data

- fast and automated computer-based predictions

- Analysis of relevant business drivers and their use to learn about possible future scenarios

What Predictive Analytics is NOT

- universal intelligence to replace humans

- a crystal ball predicting all future shocks

- a one-size-fits-all solution for all my data problems

Forecasting

Regression

Classification

Predictive Analytics

Text Analysis

…

Machine Learning
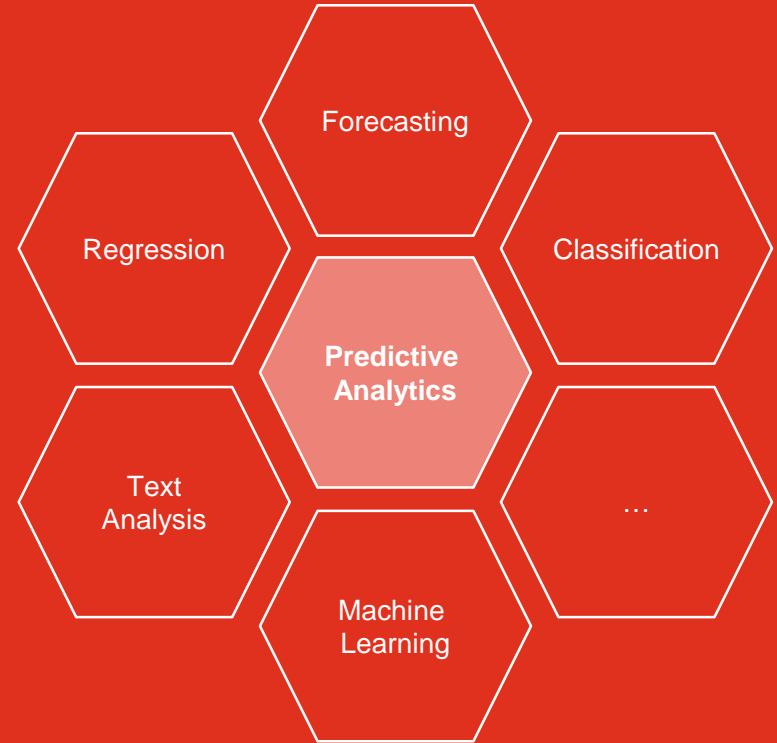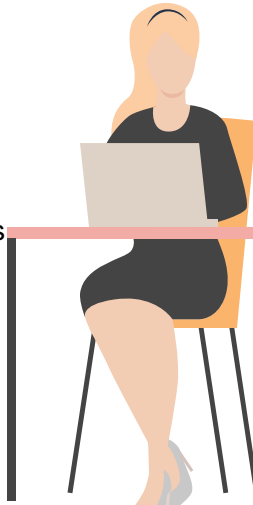
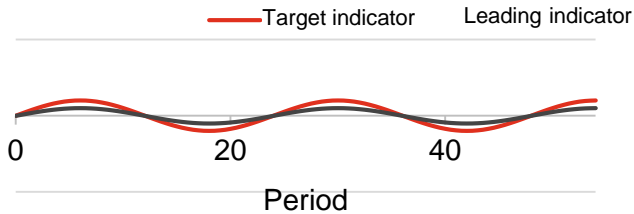Predictive analytics analyse current and historical facts to make predictions about the future.

Properties of leading indicators
Procyclicality and lead
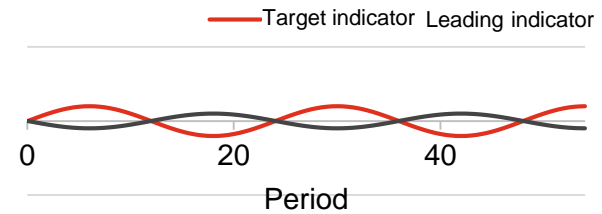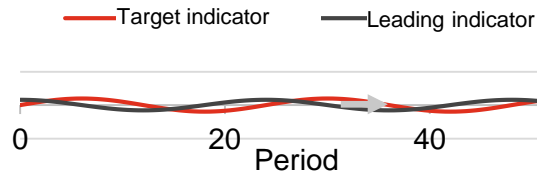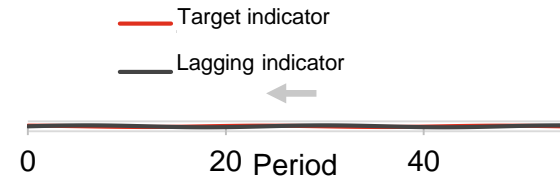
**Procyclical process**   Countercyclical process

— Target indicator   Leading indicator

0   20   40

Period

Leading indicator   Lagging indicator

— Target indicator   Leading indicator

0   20   40

Period

— Target indicator   Leading indicator

0   20   40

Period

— Target indicator

— Lagging indicator

0   20   Period   40

Early warning systems use procyclical processes in combination with a lead

An example of procyclicality and lead...

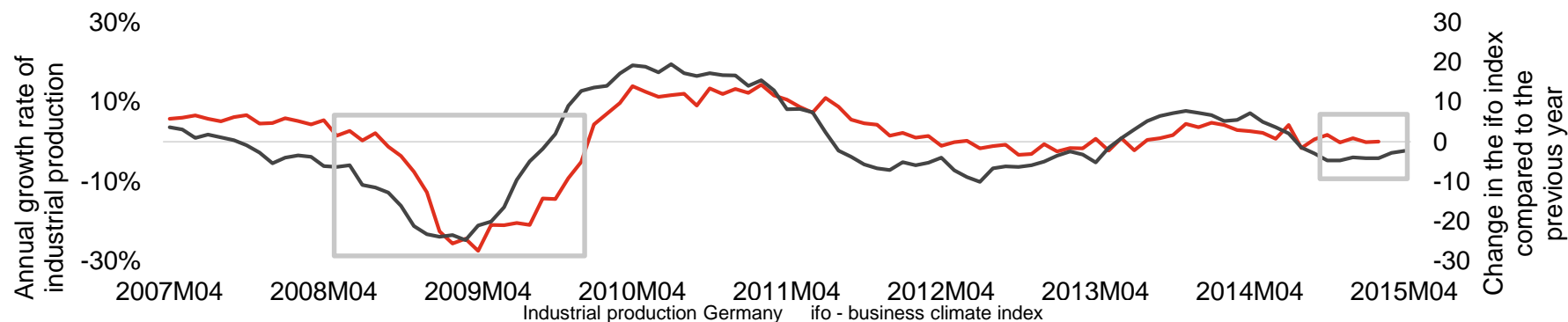**Industrial production and ifo business climate index**

Industrial production Germany   ifo - business climate index
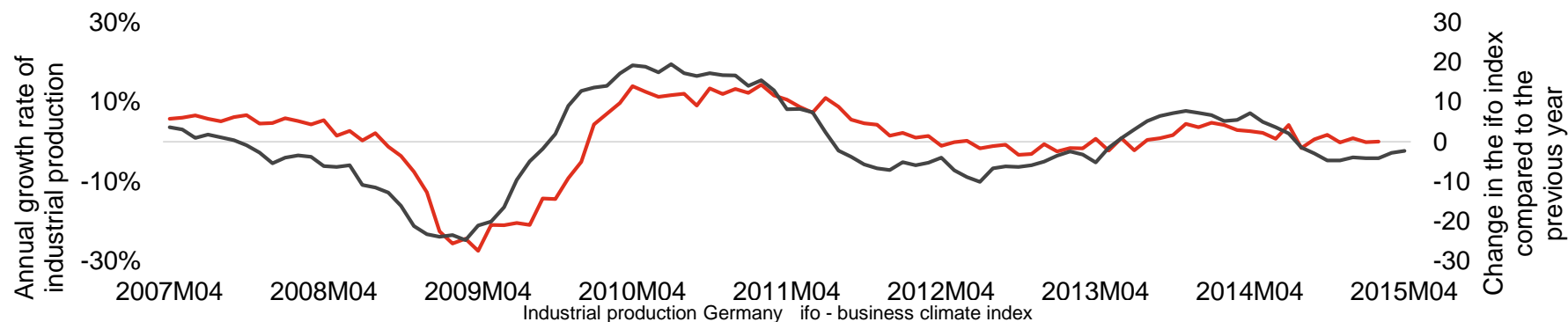
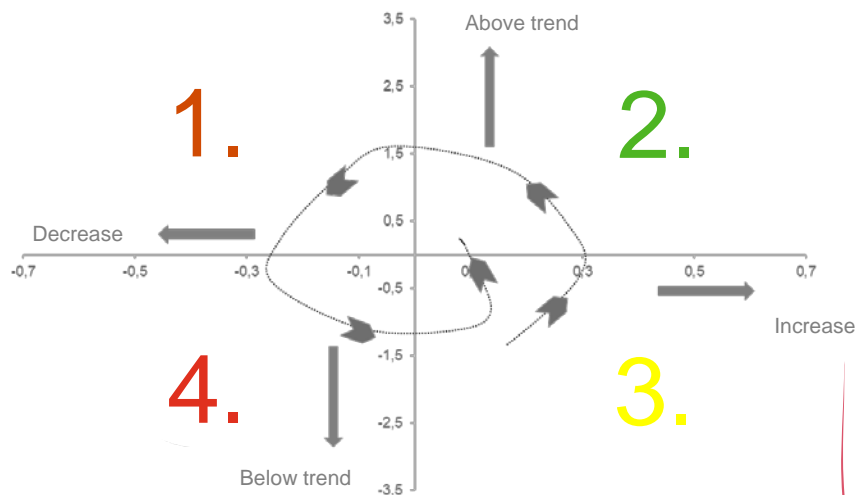| Period shift	0	1	2	3	4	5	6
Correlation between target and leading indicator	0,721*	0,792*	0,834*	0,852*	0,848*	0,826*	0,778*

A lead of three periods of the leading indicator has the highest positive correlation → **procyclical** and **leading**

*Significant to the 1% level,
Period 2007M01 - 2015M02

An example of lead and publication lead...

Industrial production and ifo business climate index

Industrial production Germany   ifo - business climate index

Lead:
~3 months

Lead + publication lead =
~5 months

Publication lead:
~2 months

3,5

Above trend

2,5

1. 2.

1,5

0,5

Decrease

-0,7 -0,5 -0,3 -0,1 0 0,3 0,5 0,7

-0,5

Increase

4. 3.

-1,5

-2,5

Below trend -3,5

1 Growth above long-term trend
Decrease compared to previous month

2 Growth above long-term trend
Increase compared to previous month

3 Growth below long-term trend
Increase compared to previous month

4 Growth below long-term trend
Decrease compared to previous month

What`s next? How to get started

Get challenged on the scenarios for your business and derive data- and fact-driven decision making on the optimal measures for your business

PWC OUTSIDE-IN ASSESSMENT

- Relevant scenario parameters for COVID-19
- Long-term macroeconomic scenarios
- Potential impact on business development (market, industry, peer based)

Outside-in view Workshop
(Management Team, 3-4 hrs)

- ✔ key risk areas
- ✔ need for further investigation
- ✔ available measures
- ✔ roadmap

YOUR CURRENT FORECASTING

- Pre-COVID-19 budget
- Adjusted planning parameters from operations
- Current scenarios derived

Potential follow-ups

Enhance scenario planning

Assess possible change of future business model

Adjust restructuring or ramp-up plan

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Ask us anything - Q&A

Covid-19 | Crisis Impact Prediction and Simulation

Instructions

In this Q&A, **you** as the audience can get involved, so please submit your questions for your Experts via the **questions box** on your **left hand side**

Thank you!

One Point of Contact:

Via <u>our crisis helpline</u> and PwC Switzerland website (<u>EN</u> I <u>DE</u> I <u>FR</u>)

Your experts today:

Reto Brunner
Business
Restructuring Services
<u>E-mail</u>

Maurice-Oliver Nipper
Finance Transformation
Lead PwC Switzerland
<u>E-mail</u>

Gori von Hirschhausen
Finance Transformation
Lead PwC Europe
<u>E-mail</u>

Roland Werner
Partner PwC Germany
<u>E-mail</u>

Frauke Schleer-van Gellecom
Predictive Analytics
Specialist PwC
Germany
<u>E-mail</u>

Philipp Appenzeller
Data Analytics Expert
PwC Germany
<u>E-mail</u>

Thank you

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