COVID-19

Crisis Impact Prediction and Simulation

May 2020
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**
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?

Which Markets are particularly affected?

What influence do political decisions have?

How effective are corporate countermeasures?

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

### 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

### Expected effects on business development

<table>
<thead>
<tr>
<th>Event</th>
<th>Scenario 1 EBIT effect</th>
<th>Scenario 2 EBIT effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lockdown extension DE</td>
<td>✓ 50</td>
<td>✓ 50</td>
</tr>
<tr>
<td>Sales slump 17% Europe</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Factory closure Spain</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Relaunch Asia</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Corporate countermeasures</td>
<td>✓ 29</td>
<td>✓ 22</td>
</tr>
<tr>
<td>Investment delay 1 year</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Introduction of short-time work</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Tax deferral</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Simulated outcome</td>
<td>✓ 41 (-18%)</td>
<td>✓ 34 (-32%)</td>
</tr>
</tbody>
</table>

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PwC
Our solution
Impact Prediction & Simulation offers a platform for scenario evaluation based on various methodological approaches.
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

Predictive analytics analyse current and historical facts to make predictions about the future.
Properties of leading indicators

Procyclicality and lead

Early warning systems use procyclical processes in combination with a lead.
An example of procyclicality and lead...

**Industrial production and ifo business climate index**

<table>
<thead>
<tr>
<th>Period shift</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation between target and leading indicator</td>
<td>0.721*</td>
<td>0.792*</td>
<td>0.834*</td>
<td>0.852*</td>
<td>0.848*</td>
<td>0.826*</td>
<td>0.778*</td>
</tr>
</tbody>
</table>

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

Annual growth rate of industrial production

Change in the ifo index compared to the previous year

Lead:
~3 months

Publication lead:
~2 months

Lead + publication lead = ~5 months

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Excursus

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)

**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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**Outside-in view Workshop (Management Team, 3-4 hrs)**
- **✔** key risk areas
- **✔** need for further investigation
- **✔** available measures
- **✔** roadmap

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Ask us anything - Q&A

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 our crisis helpline and PwC Switzerland website (EN | DE | FR)

Your experts today:

- Reto Brunner
  Business Restructuring Services
  [E-mail](#)
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Thank you