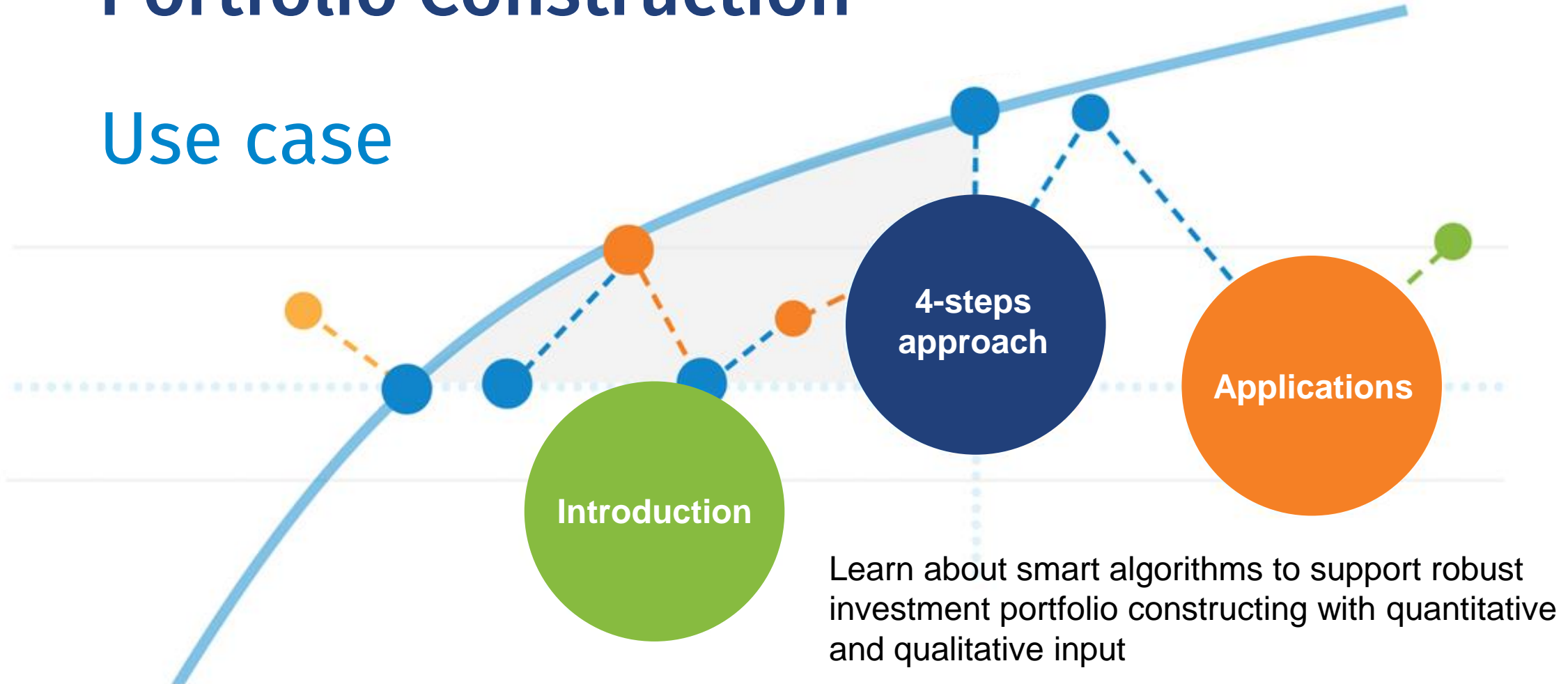


Robust Near-Optimal Portfolio Construction

Use case



Introduction

- Goal: constructing a **realistic portfolio** that is within the **risk budget** and **robust** for the assumptions made
- **Near-optimal optimization** is a smart technique that enables you to find these portfolios in an efficient way
- It generates multiple asset allocations with a **similar risk-return profile**
- The near-optimal portfolios are **robust** to changes in economic assumptions
- It enables to incorporate **quantitative and qualitative input** in the ultimate portfolio construction process



4-steps approach



1. Define the risk budget



2. Find all portfolios within the risk budget



3. Incorporate qualitative arguments



4. Construct a robust investment portfolio



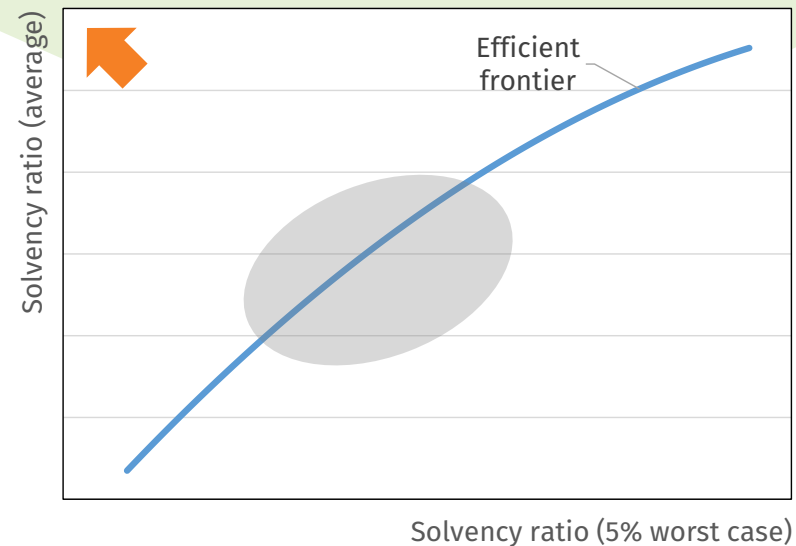
4-steps approach



1. Define the risk budget



Reflected by a relevant risk metric and horizon tailored to your organization



- Example risk metrics for this use case: expected 1-year solvency ratio and the average 1-year loss in the 5% worst case solvency ratio scenarios
- Grey area: **risk budget**



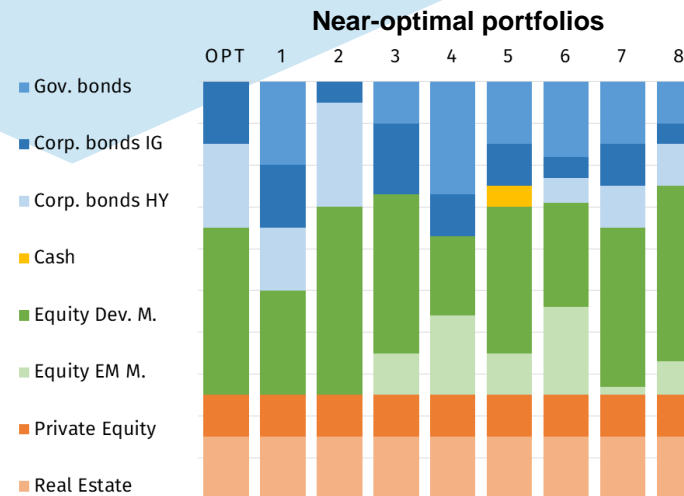
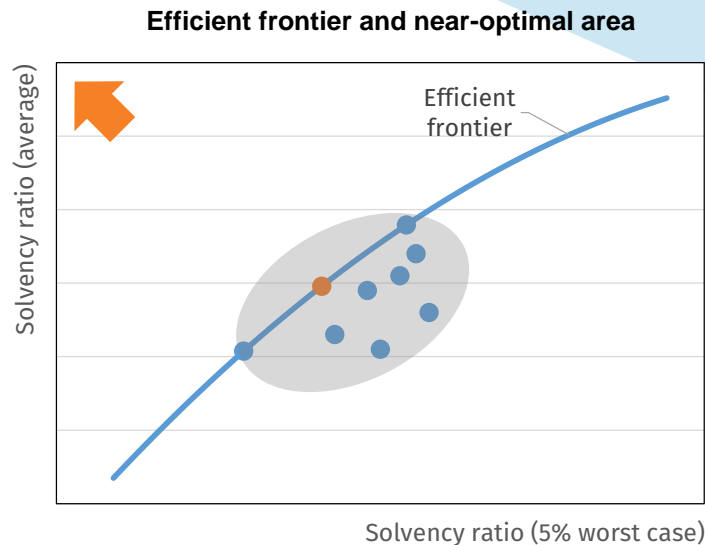
4-steps approach



2. Find all portfolios within the risk budget



Apply the innovative Ortec Finance optimization techniques and let smart algorithms find all 'near optimal' portfolios within the risk budget



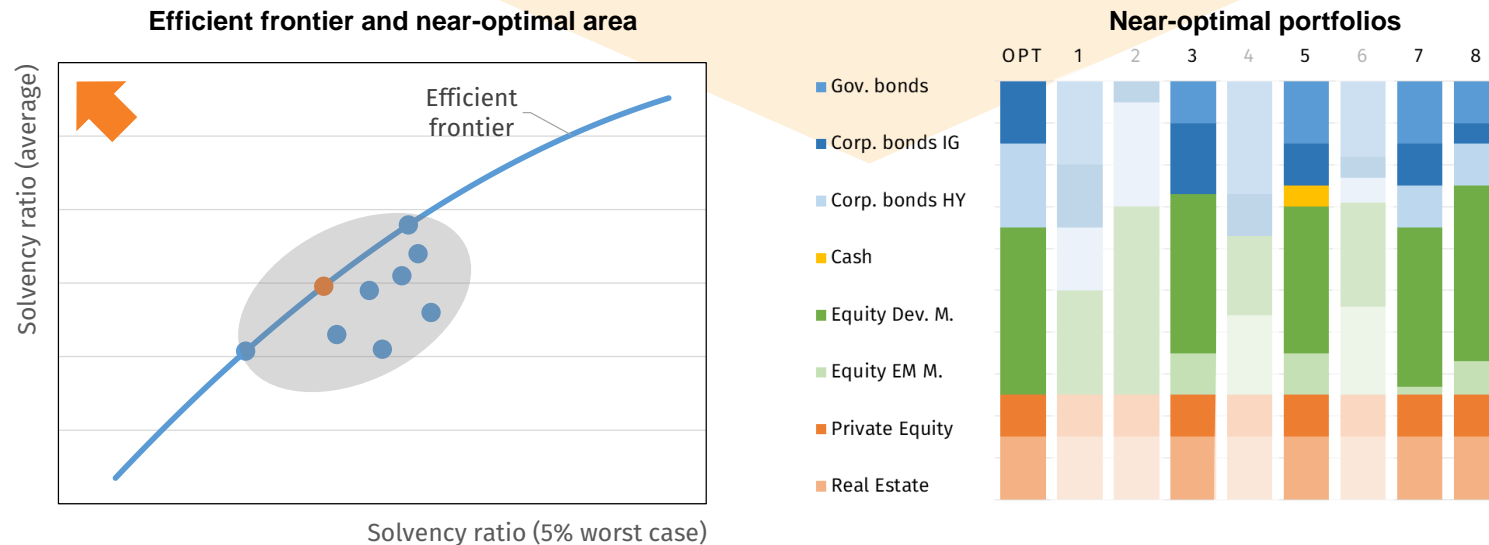
Near-optimal portfolios show **similar risk and return** characteristics for multiple asset allocations



4-steps approach

3. Incorporate qualitative arguments

Incorporate qualitative arguments such as ESG criteria, transaction costs, market views, and combine this with the robust quantitative asset allocation insights to facilitate discussions with your investment committee



⌘ This example: High Yield credits are not preferred for due to a low **ESG score** of the current mandate

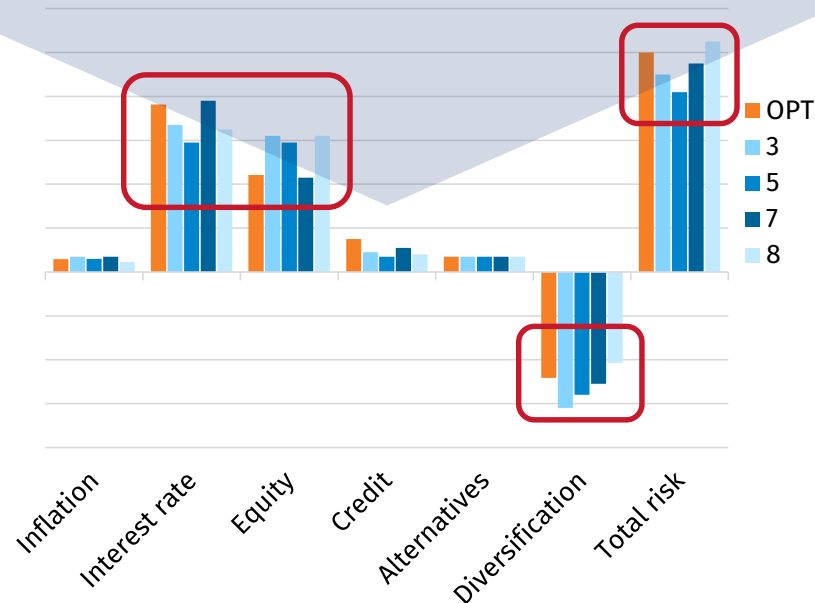
4-steps approach



4. Construct a robust investment portfolio



In construction, use a combination of (weighted) near-optimal portfolios that satisfies the risk budget and incorporates qualitative criteria



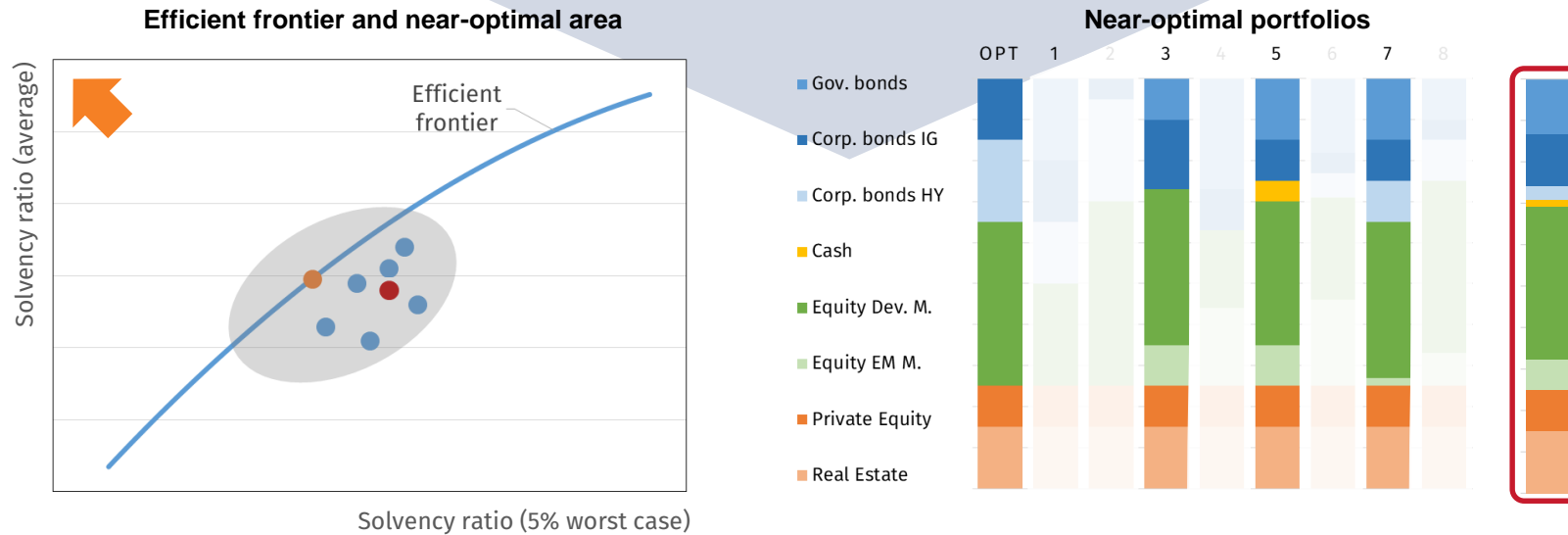
📊 A **risk decomposition** shows higher diversification benefits for portfolios 3, 5 and 7



4-steps approach

4. Construct a robust investment portfolio

In construction, use a combination of (weighted) near-optimal portfolios that satisfies the risk budget and incorporates qualitative criteria



- ⌘ The candidate portfolio is a **weighted combination** of near-optimal portfolios 3, 5 and 7
- ⌘ This portfolio is a **realistic portfolio** that is **near optimal** and **within the risk budget**

Applications

Improve the risk-adjusted return of the annual investment plan (robust portfolio construction)

Facilitate the discussion and align all stakeholders in the investment decision process

Avoid unnecessary transaction costs

Learn more

Learn more about the underlying robust optimization technique with the technical paper

Read paper



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About Ortec Finance

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Headquartered in Rotterdam, Ortec Finance has offices Amsterdam, London, Toronto, Zurich and in Hong Kong.

- 20+ countries represented
- 500+ customers
- 96% retention rate
- 3 trillion euro total assets managed by our clients.

We enable people to manage the complexity of investment decision making

