



Partners Group

REALIZING POTENTIAL IN PRIVATE MARKETS

# Private Markets: challenges for risk managers

14 September 2018



Green Tea Restaurant | Private Equity

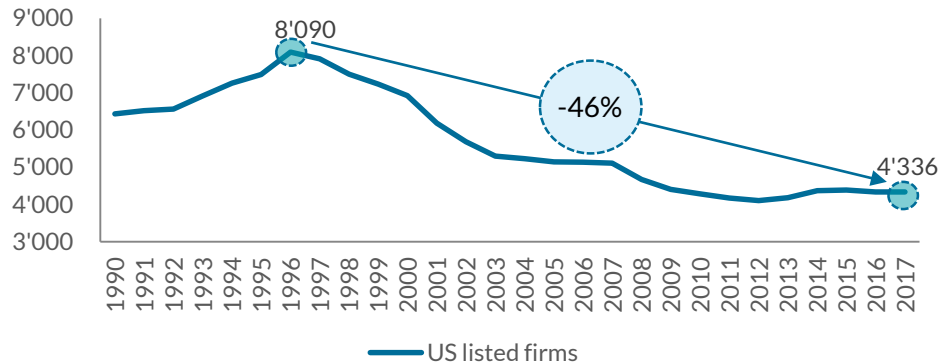
Not for use in the United States

- 1 Evolution of private markets
- 2 Measuring and managing risks
- 3 Areas for further research
- 4 Conclusions

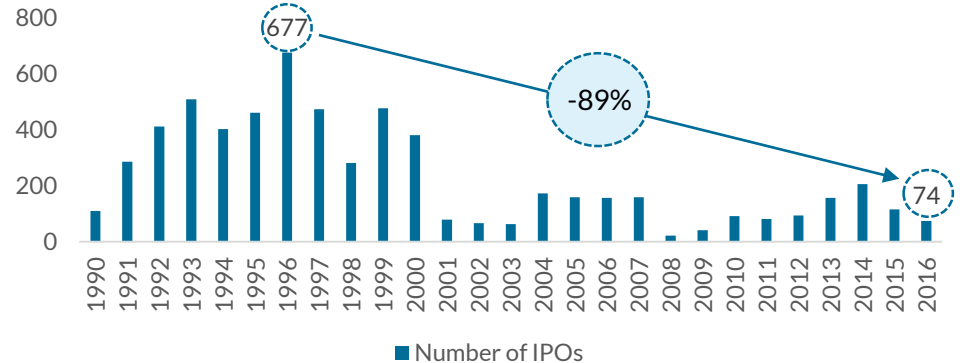
# Evolution of private markets

# Macro trends in public markets: the shrinking universe

## Declining number of listed stocks<sup>1</sup>



## Collapse in IPO volume<sup>2</sup>



## Index exposure to a few stocks<sup>3</sup>

Facebook, Amazon, Apple, Netflix, Google (FAANG) have become a big part of the S&P 500 as shown below':

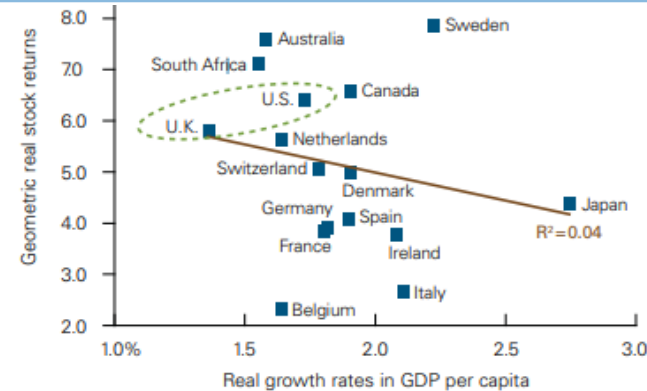
**11%**

share of market cap

**10%**

share of earnings

## Relevance for real economy<sup>4</sup>



Weak average link between GDP growth and stock returns over the long run

Source: 1 Worldbank 2 Ritter, Jay R., Qie (Ellie) Yin, and Hongyu (Derek) Shan. Initial Public Offerings: Updated Statistics. Report no. 352.846-2837. University of Florida. February 20, 2017 3 DWS Americas CIO View | March 26, 2018 - "FANG" or FAANG refers to the following tickers: FB, AMZN, AAPL, NFLX, GOOGL, GOOG 4 Vanguard (2010) - Scatterplot across 16 major markets; data from 1900 through 2009. Vanguard Investment Strategy Group calculations based on data from Dimson, Marsh, and Staunton (2003); International Monetary Fund; MSCI; Thomson Financial Datastream; and the World Bank.

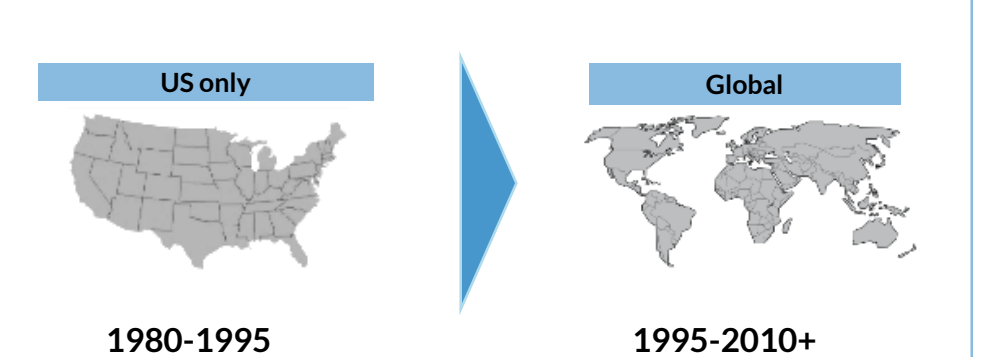


# Macro trends in private markets: the growing universe

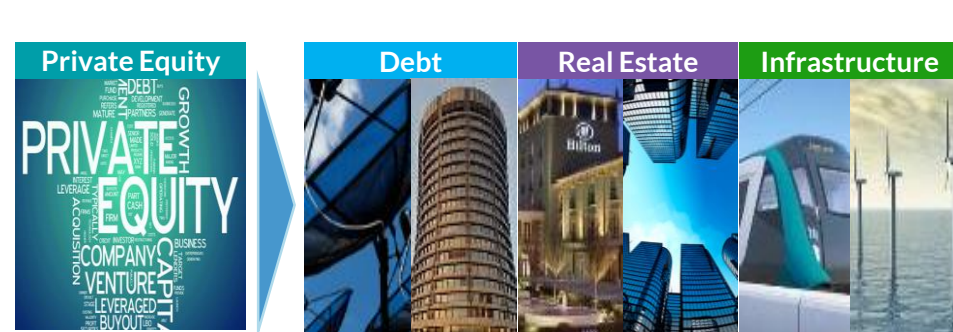
## Expansion across sectors<sup>1</sup>



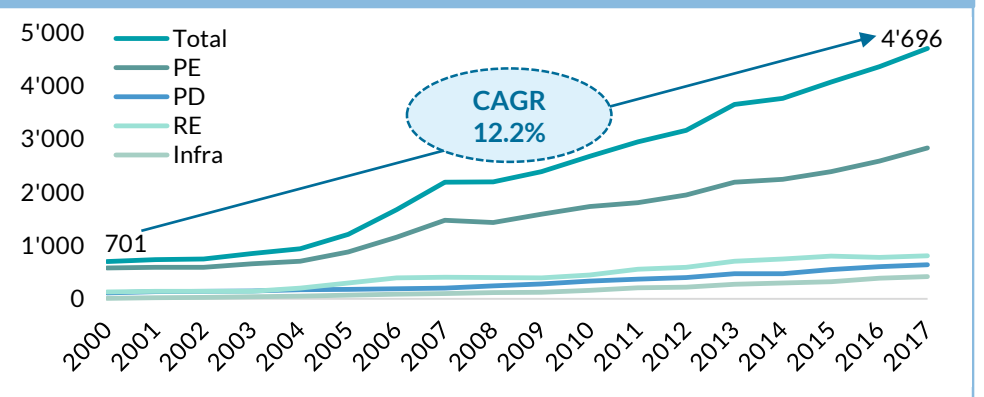
## Expansion across regions<sup>1</sup>



## Broadening of private markets<sup>1</sup>



## Steady private markets growth<sup>2</sup>

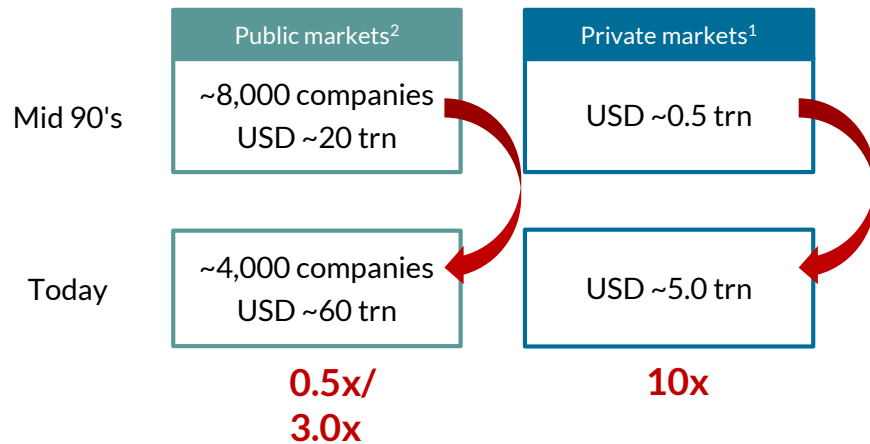


Source: 1 For illustrative purposes only. Source: Partners Group research 2017 2 Partners Group based on data provided by Preqin. AuM data represent the period from Dec 2000 until June 2017.

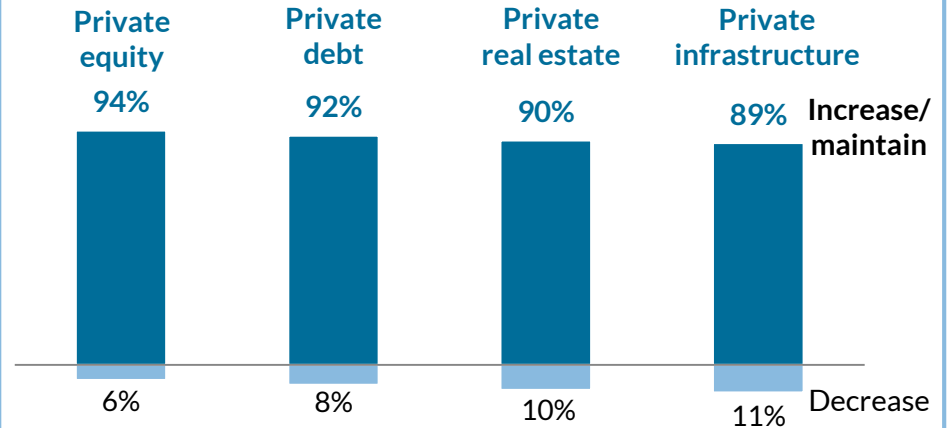
# Institutional investors struggle to optimize their capital allocation

- Investors routinely **fall short of their desired allocation to private markets<sup>1</sup>** as the traditional buyout model leads to **significant re-investment needs**, while their allocations to public equity becomes **more concentrated and passive**

## The rise of private markets



## Private market allocations continue to increase<sup>3</sup>



Investors increase private market allocation for diversification, exposure to real economy and active governance model for driving value

For illustrative purposes only.

<sup>1</sup> McKinsey Global Private Markets Review – February 2017 <sup>2</sup> Credit Suisse "The Incredible Shrinking Universe of Stocks" published 22 March 2017

<sup>3</sup> Preqin Alternative Asset Outlook (H1 2017) "Survey of institutional investors' intentions for their private markets allocations over the long term." (14 January 2018)

Source: Partners Group (March 2018)

For internal use only.



# Examples and characteristics of private markets investments

## Private Equity



Largest for-profit **operator of childcare** in the USA (~1'400 locations in 38 U.S. states)

Childhood education

## Private Infrastructure



Construction of **solar plants in Japan** with total capacity of over 300MW and 20 year contracts

Renewable energy

## Private Real Estate



Expansion of a **logistics center** with development potential in the commercial center of **Sydney, Australia**

E-commerce

## Characteristics of private market transactions

- **Liquidity:** Shares can usually only be acquired and sold in large quantities
- **Transparency:** Information about the company is more detailed, but only accessible for shareholders
- **Involvement:** Shareholders are generally heavily involved and do hold a majority stake in the company
- **Access:** Significant access to capital and strong expertise / network are important requirements

For illustrative purposes only. Partners Group, 2017. Past performance is not indicative of future results. There is no assurance that similar investments will be made. KinderCare Education is Partners Group largest private equity investment in the United States. Japan Solar reflects the largest Japanese renewable energy investment made in 2014. Yennora Alcoa Sydney is Partners Group's largest real estate direct deal in the logistics sector in 2015.

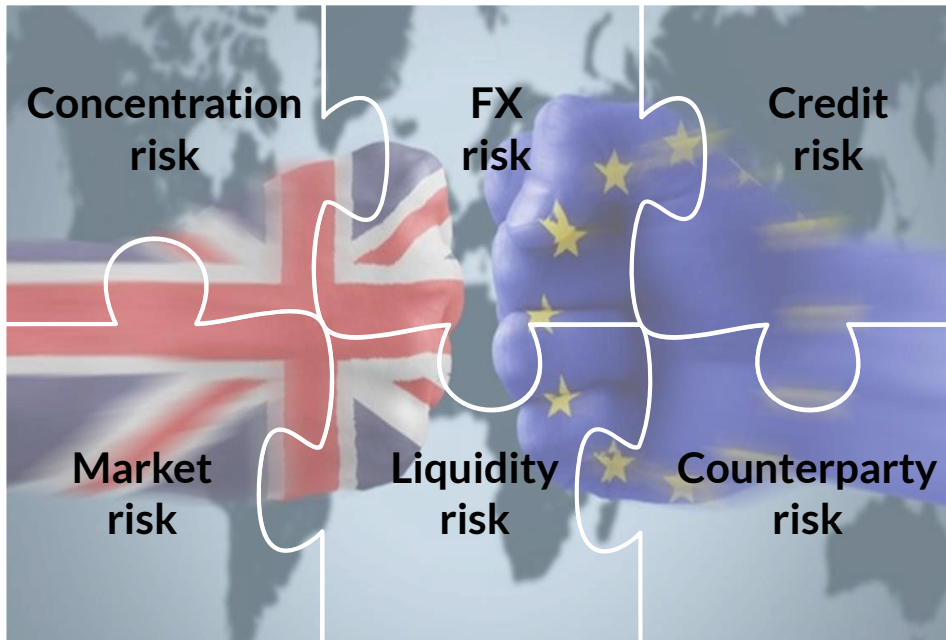
Strictly confidential

# Measuring and managing risks

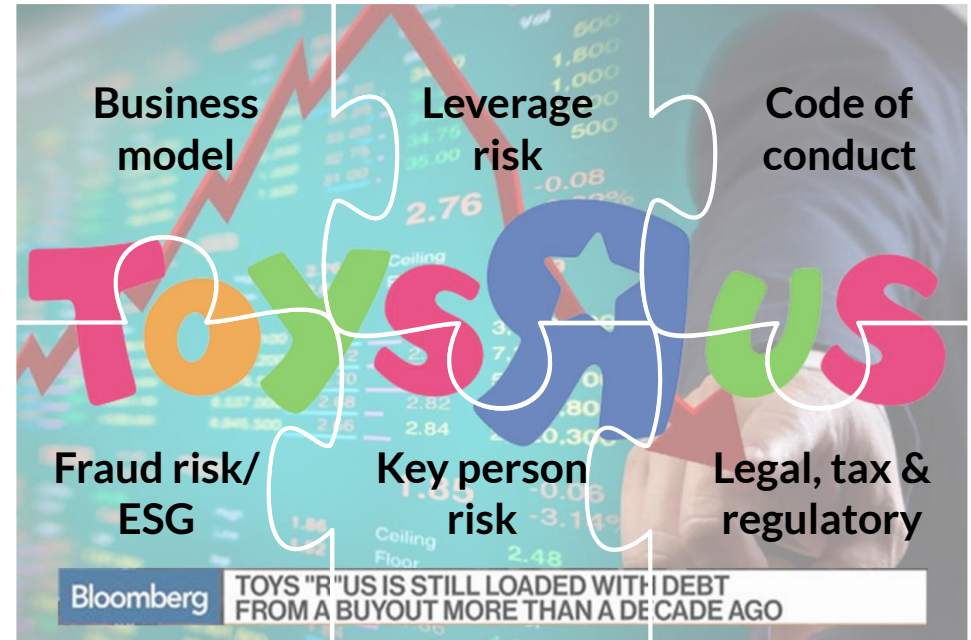


# Investment risk landscape

## Portfolio risks



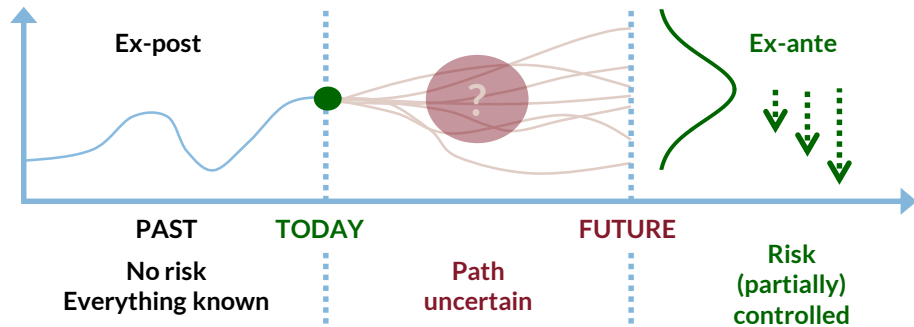
## Deal specific (idiosyncratic) risks



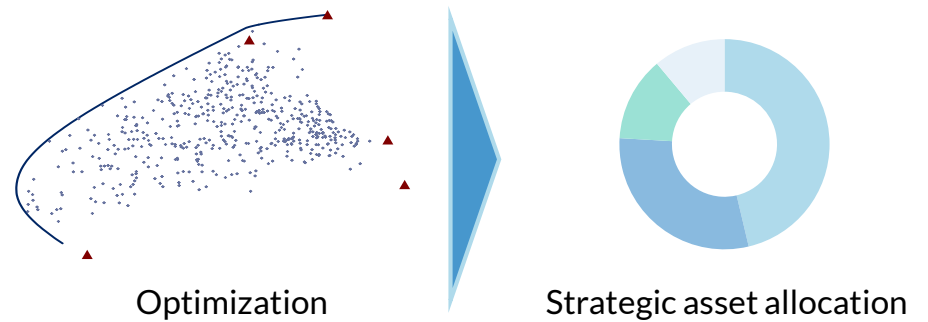
Identifying the numerous risk factors and assessing their correlations is paramount to successfully manage risks

# Market risk - Risk of loss due to changes in market price

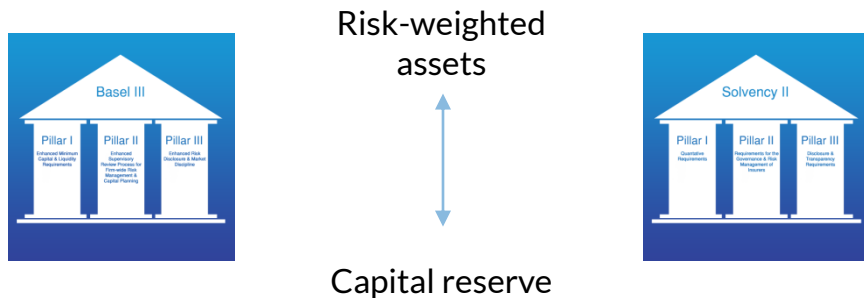
## Control the level of risk you are taking



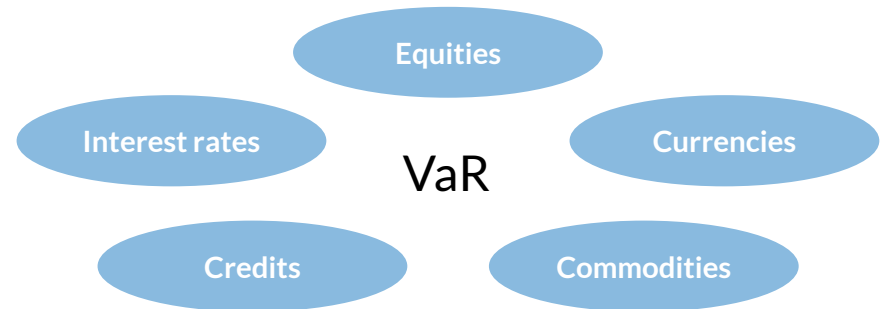
## Enhance risk-return through diversification



## Comply with regulations



## One measure to unite all market risks



A common measure of risk between asset classes allows proper portfolio construction and risk management

# Challenges of traditional risk measures (VaR)

## Hurdles to measure market risk in private markets

### Understated risk figures

- Volatility figures not comparable to public markets due to issues such as **auto-correlation and sample biases**

### Portfolio rebalancing

- **Illiquid assets** do not allow dynamic adjustments to the portfolio

### Long-term investing

- **Long-term investment horizon** makes annual volatility a less relevant measure of risk

## Why should it still be done?

### Increasing allocations

- **Measuring and comparing** private market risk becomes more important

### Regulators ask for Value-at-Risk

- Traditional risk figures put private markets on an **equal footing with public markets**

### Sophisticated investment decisions

- **Improve portfolio build-up and diversification** by exploiting standalone risks and correlations

Private markets benefit from public market risk measures

# Partners Group Market Risk Cockpit (I) beyond unsmoothing

1

**Creating segments.** Each company in Partners Group proprietary database<sup>1</sup> is mapped to one segment down the tree.

2

**Unsmoothing.** The returns of each segment are unsmoothed to unveil a series of economic returns

3

**Regression.** The economic returns of each segment are regressed against a public factor<sup>2</sup> and a purely private factor<sup>3</sup>.

$$R(t) = \alpha + \hat{\beta}^{pub} \cdot F^{pub}(t) + \hat{\beta}^{priv} \cdot F^{priv}(t) + \epsilon(t)$$

4

**Bayesian shrinkage.** The public and private sensitivities of each segment are shrunk with the (shrunk) sensitivities of its parent on the tree<sup>4</sup>.

$$\bar{\beta}^{pub/priv} = \omega \cdot \hat{\beta}^{pub/priv} + (1 - \omega) \cdot \bar{\beta}_{parent}^{pub/priv}$$

Tree of segments

Region

APC

Stage

Buyout

Size

Small cap

Industry

Healthcare

Public factor



Private factor



Proprietary Market Risk Cockpit makes private markets feel public

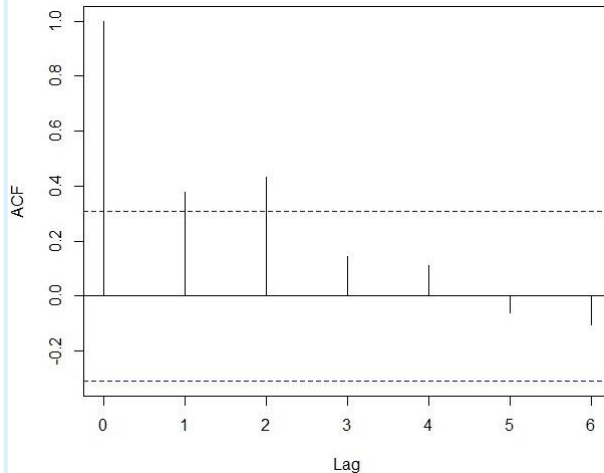


# Partners Group Market Risk Cockpit (II)

## unsmoothing returns - from observed to economic returns

### A Observed returns

- **Autocorrelations** are present in the observed returns



### B Unsmoothing

- **Geltner-Okunev-White<sup>1</sup>**  
Observed returns are combinations of true economic returns and past observed returns

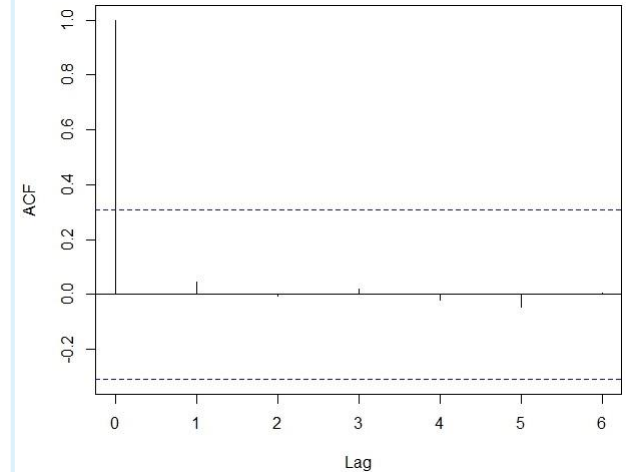
$$R_t^o = (1 - \alpha)R_t^e + \sum_i \beta_i R_{t-i}^o$$

- **Getmansky<sup>2</sup>**  
Observed returns are combinations of true economic returns in past periods

$$R_t^o = \theta_0 R_t^e + \theta_1 R_{t-1}^e + \dots + \theta_k R_{t-k}^e$$

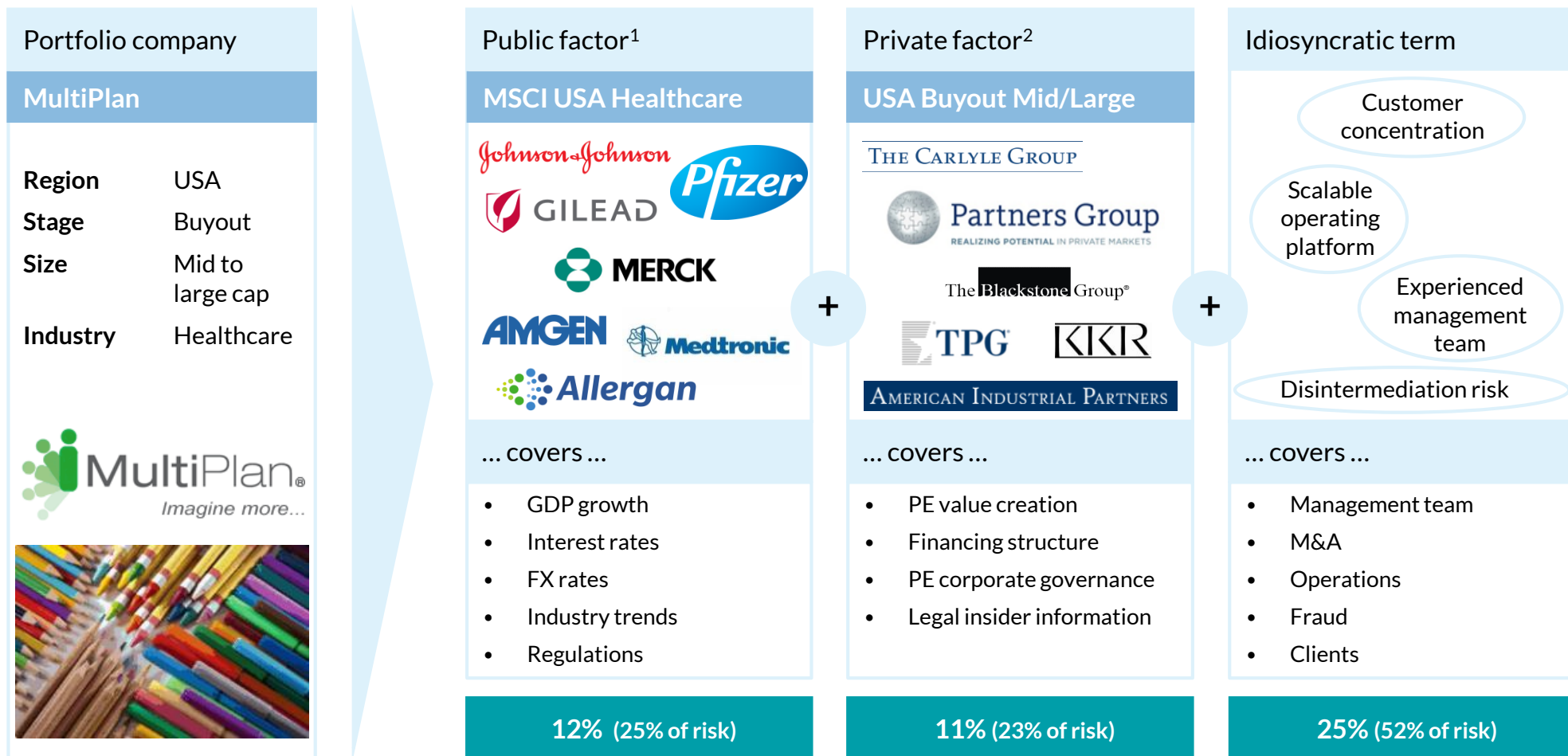
### C Economic returns

- **Economic returns<sup>3</sup>** obtained from unsmoothing are statistically uncorrelated



Any market risk analysis must be performed on economic returns to prevent a misrepresentation of the level of risk

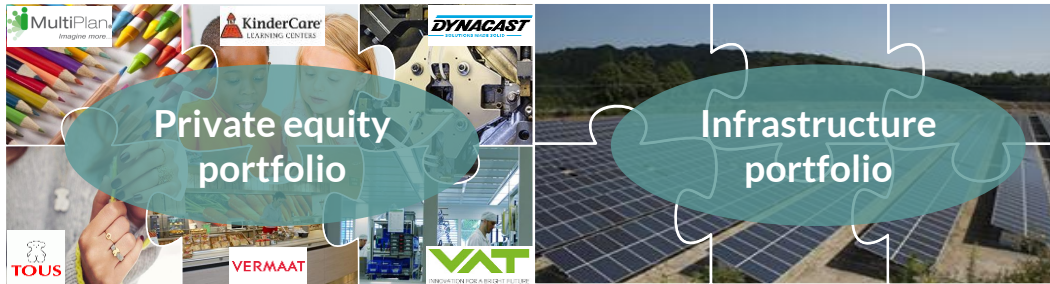
# Partners Group Market Risk Cockpit



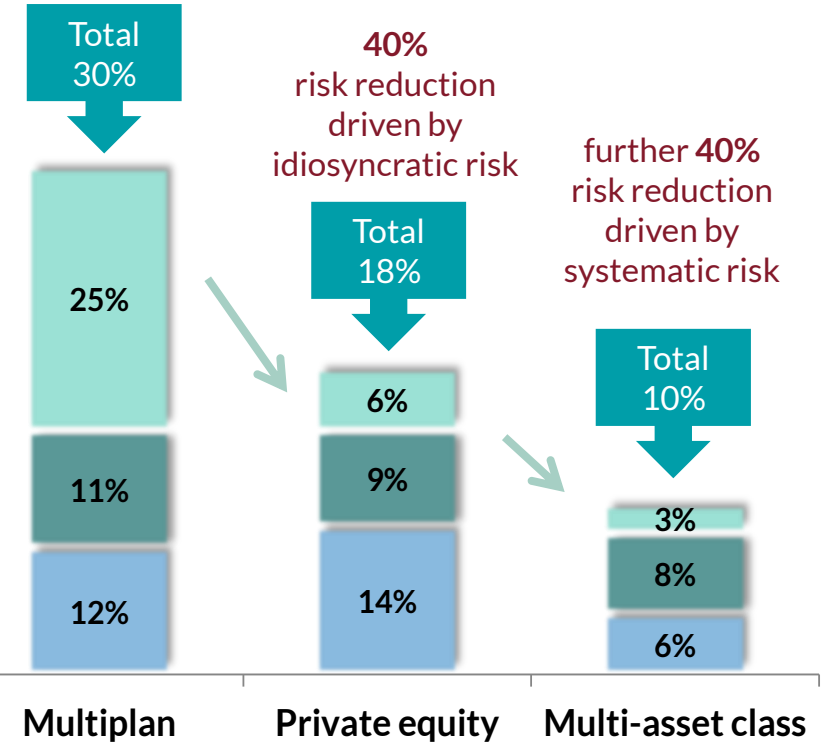
Source: Partners Group, Cambridge Associates. For illustrative purposes only. 1) Public factors are from MSCI. 2) Purely private factors are from Cambridge Associates. They are unsmoothed and made orthogonal to the public factors. Figures are from Partners Group Market Risk Cockpit.



# Pushing diversification: multi-asset portfolio



- Public factor
- Private factor
- Idiosyncratic risk



Investing across private markets asset classes allows for a reduction in systematic risk

Figures are from Partners Group Market Risk Cockpit. For illustrative purposes only. Private Equity risk figures refer to the overall portfolio of Partners Group Direct Investments 2012. Multi-asset class risk figures are calculated by pooling Partners Group Direct Investments 2012, Partners Group Direct Real Estate 2011, Partners Group Direct Infrastructure 2011 and Partners Group Direct Mezzanine 2011. Total risk is the square root of the sum of squares of each risk component.



# Liquidity risk – Cash flow and investment level forecasts allow investors to manage their exposure

## Investment level steering

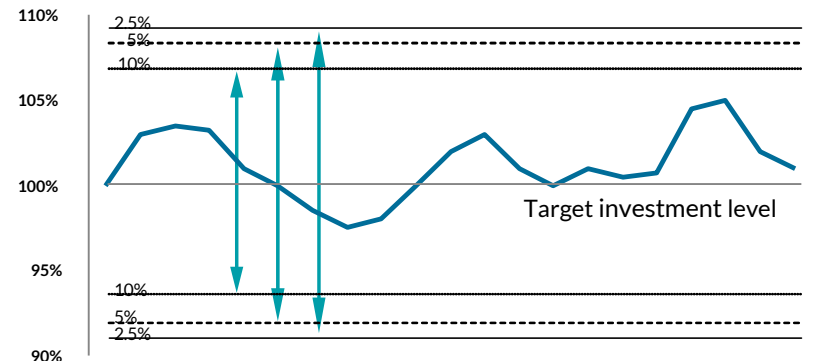
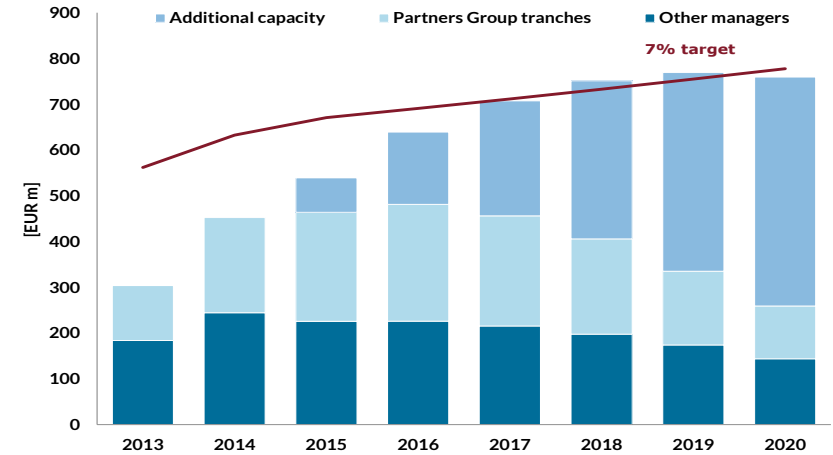
Being able to forecast exposure to private markets is a prerequisite to plan commitments, **achieve and maintain the targeted investment level** and **minimize return dilution**

## Cash/liquidity management

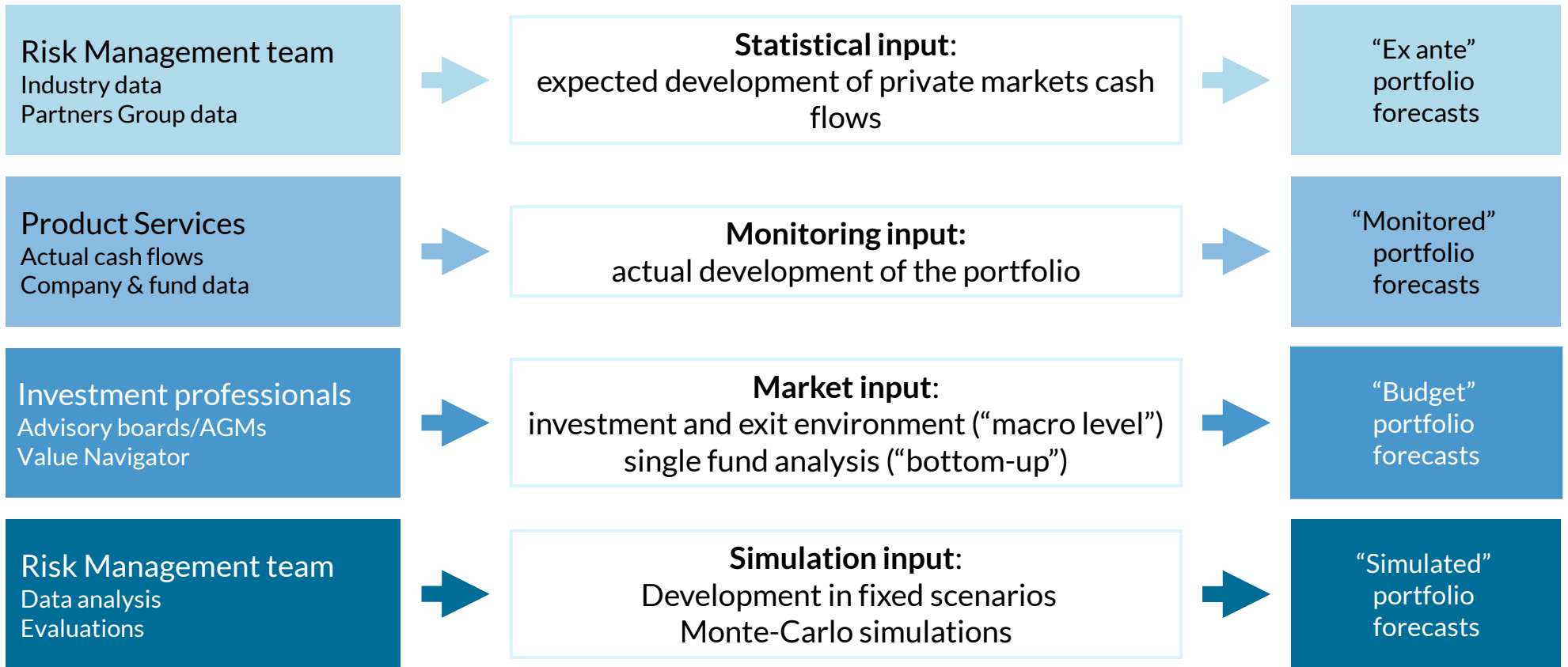
Anticipating cash flows is paramount to **manage liquidity**

## Risk management

Assessing the variability of private markets cash flows, valuations, FX rates, etc., allows for **defining possible bandwidths for the portfolio development**



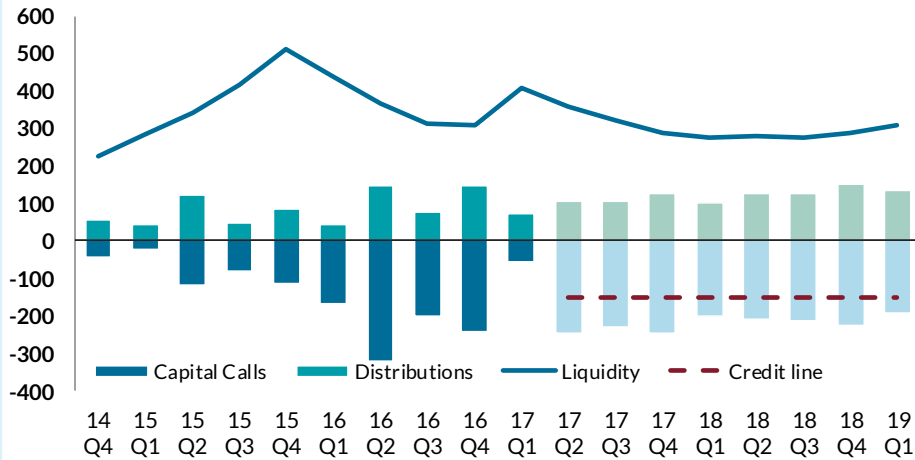
# Investment level steering - Partners Group's cash flow forecasting model



Cash flow modeling is more than statistics and mathematics

# Managing liquidity and investment levels

## Base case liquidity profile



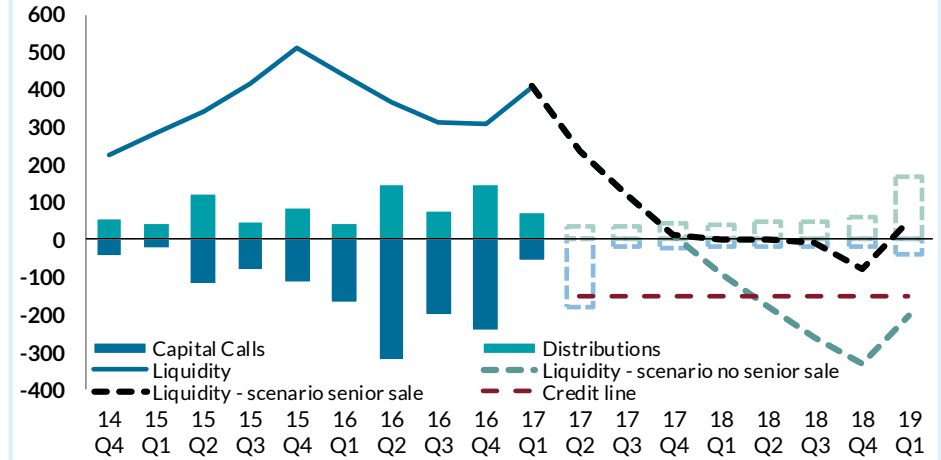
### Forecast

- Net inflows
- Portfolio cash flows

### Investment strategy

- How much to invest
- When to invest

## Liquidity stress scenario



### Stress test

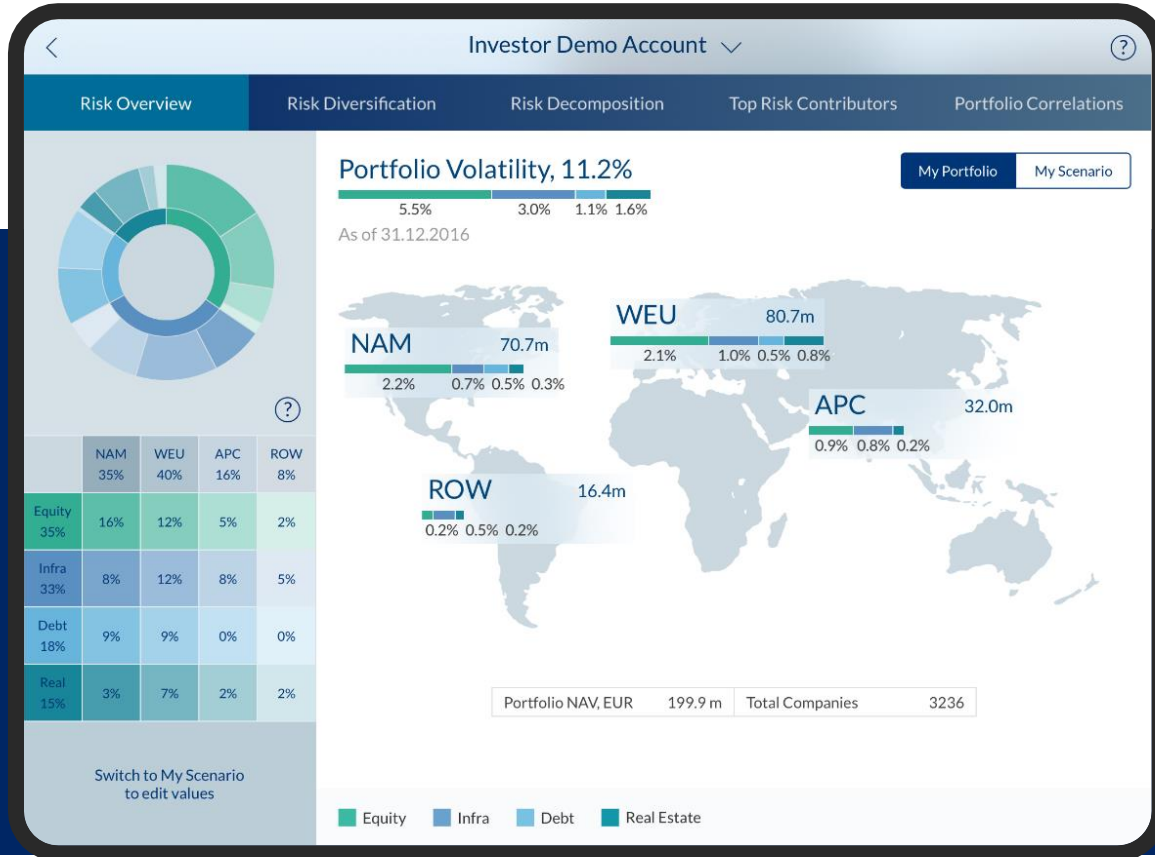
- Net outflows
- Portfolio cash flows and performance

### Calibrate

- Allocation to (semi-) liquid assets
- Credit line

Achieve target investment level while balancing liquidity needs and sources in stress scenarios

# Communicating with investors



- Understand risk contribution by region and asset class
  - E.g. 16% allocation to private equity NAM contributes 2.2% to the total portfolio volatility
- Compare risk in your current portfolio with alternative portfolios using My Scenario feature

Areas for further research

# Areas for further research

## 1 Cost focus versus return focus

- Regulators impose additional requirements in terms of cost transparency
- Comparability of costs across asset classes and strategies are not understood
- Cost focus and TER caps mask the main challenge: optimizing long-term benefits

## 2 Understanding the relation between risk and reward

- Private market investments are illiquid
- In an ever more efficient market, returns are earned by taking on specific risks
- Pricing risks and driving long-term value will determine long-term success

## 3 Allocation and illiquidity

- Most institutional investors are subject to long-term liabilities
- Assessing optimal allocations to meet long-term liabilities within the full spectrum of asset classes goes far beyond traditional methods

A lot is still ahead of us ...

# Conclusions



# Contacts

Michael Studer  
Chief Risk Officer  
T +41 41 784 65 45  
[michael.studer@partnersgroup.com](mailto:michael.studer@partnersgroup.com)

Zugerstrasse 57  
6341 Baar-Zug  
Switzerland  
T +41 41 784 60 00

[partnersgroup@partnersgroup.com](mailto:partnersgroup@partnersgroup.com)  
[www.partnersgroup.com](http://www.partnersgroup.com)



**Partners Group**

REALIZING POTENTIAL IN PRIVATE MARKETS

# Disclaimer

This material has been prepared solely for purposes of illustration and discussion. Under no circumstances should the information contained herein be used or considered as an offer to sell, or solicitation of an offer to buy any security. Any security offering is subject to certain investor eligibility criteria as detailed in the applicable offering documents. The information contained herein is confidential and may not be reproduced or circulated in whole or in part. The information is in summary form for convenience of presentation, it is not complete and it should not be relied upon as such. Any interests referenced herein have not been and will not be approved or disapproved by the U.S. Securities and Exchange Commission or by the securities regulatory authority of any U.S. state or any other relevant jurisdiction, and no other authority or commission has passed upon the accuracy or adequacy of this presentation. Any representation to the contrary is a criminal offense. All information, including performance information, has been prepared in good faith; however, Partners Group makes no representation or warranty express or implied, as to the accuracy or completeness of the information, and nothing herein shall be relied upon as a promise or representation as to past or future performance. This material may include information that is based, in part or in full, on hypothetical assumptions, models and/or other analysis of Partners Group (which may not necessarily be described herein), no representation or warranty is made as to the reasonableness of any such assumptions, models or analysis. Any charts which represent the composition of a portfolio of private markets investments serve as guidance only and are not intended to be an assurance of the actual allocation of private markets investments. The information set forth herein was gathered from various sources which Partners Group believes, but does not guarantee, to be reliable. Unless stated otherwise, any opinions expressed herein are current as of the date hereof and are subject to change at any time. All sources which have not been otherwise credited have derived from Partners Group. No representation is being made that any account or fund will or is likely to achieve profits or losses similar to the results being portrayed herein. The gross annual rate of returns represents the compound annual rate of return ("IRR") before management fees, organizational expenses and the general partner's allocation of profit, but in some instances (where indicated), net of the underlying general partner's fees and expenses. The net annual rate of return represents the IRR after management fees, organizational expenses and the general partner's allocation of profit. Actual realized returns on unrealized investments will depend on, among other factors, future operating results, the value of the assets, market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions and circumstances on which the valuations used in the performance data contained herein are based. Accordingly, the actual realized returns on these unrealized investments may differ materially from the returns indicated herein. Nothing contained herein should be deemed to be a prediction or projection of future performance of any investment. Certain information contained in this presentation constitutes "forward-looking statements," which can be identified by the use of forward-looking terminology such as "may", "will", "should", "expect", "anticipate", "target", "project", "estimate", "intend", "continue" or "believe" or the negatives thereof or other variations thereon or comparable terminology. Due to various risks and uncertainties, actual events or results or the actual performance of any investment may differ materially from those reflected or contemplated in such forward-looking statements.