

Illiquid Assets/Private Markets Institutional Approaches to Risk

October 2025

Danny Slots

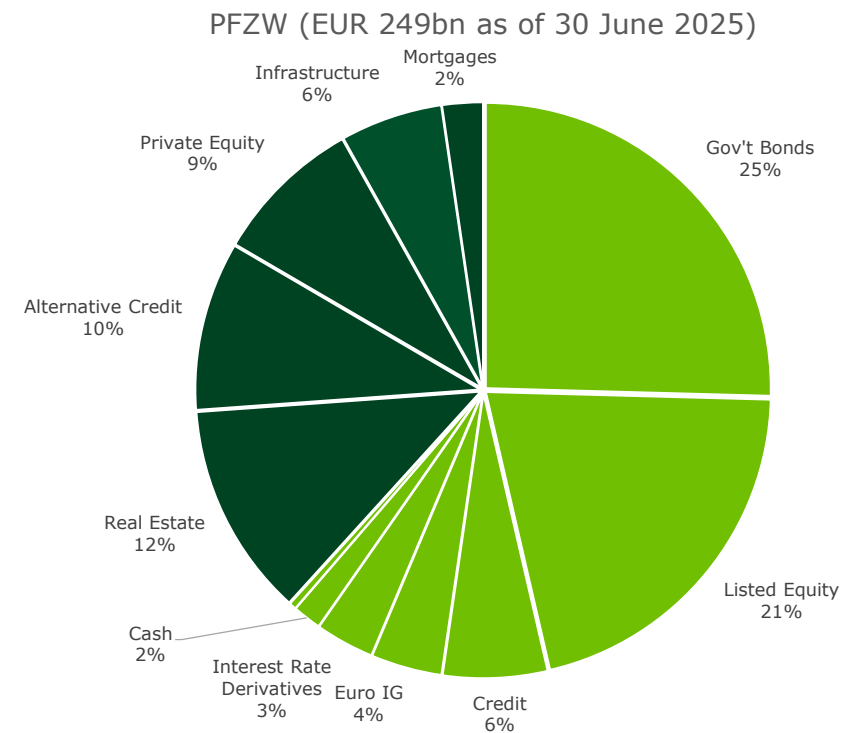


Topics for Today

PGGM Private Markets Intro

Investment Risk on Portfolio Level

Investment Risk on Deal Level



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Investment Risk on Deal Level



Concentration Risk

What is Concentration Risk?

- Concentration risk refers to the possibility of unexpected and undesired over-exposures forming within a portfolio or on the balance sheet

In private markets:

- Limited number of investments due to minimum investment sizes
- Dependence on a few asset managers
- Over-exposures on specific sectors
- Combined analysis: Monitor both public and private markets together, based on the most complete possible look-through

Examples of Concentration Risk

- Managers (e.g. too much exposure with one asset manager)
- Countries (e.g. geopolitical risks)
- Sectors (e.g. technology, energy)
- Currencies
- Ratings
- Issuers (e.g. positions in a single company)
- Underlying risk factors (e.g. sensitivity to oil prices)
- Style factors (e.g. value vs. growth)
- Maturities (duration risk)

Direct Private Markets – Capacity for Size

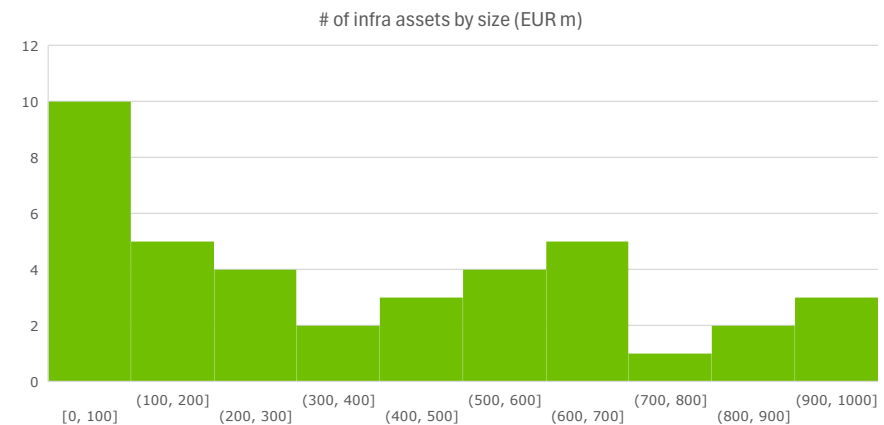
Direct Investments

- Pension fund directly holds a stake in an investment

Indirect Investments

- Pension fund holds a stake in an investment via a vehicle such as a fund
- For the 10th largest Dutch pension fund, a single EUR 300m infra investment constitutes less than 1% of the total portfolio
- **Diversification is hard to get in such a portfolio**
- Alternative would be to participate in a fund

Twaalf Grootste Nederlandse Pensioenfondsen		
		EUR bn
1	ABP	526.57
2	PFZW	250.01
3	PMT	87.01
4	BPF Bouw	68.51
5	PME	56.96
6	PF Vervoer	37.67
7	Grafisch	33.67
8	Rabobank	31.21
9	ABN Amro	29.38
10	Shell	28.85
11	ING	28.14
12	Spoorweg PF	25.06



Concentration Risk to Manager and/or Fund

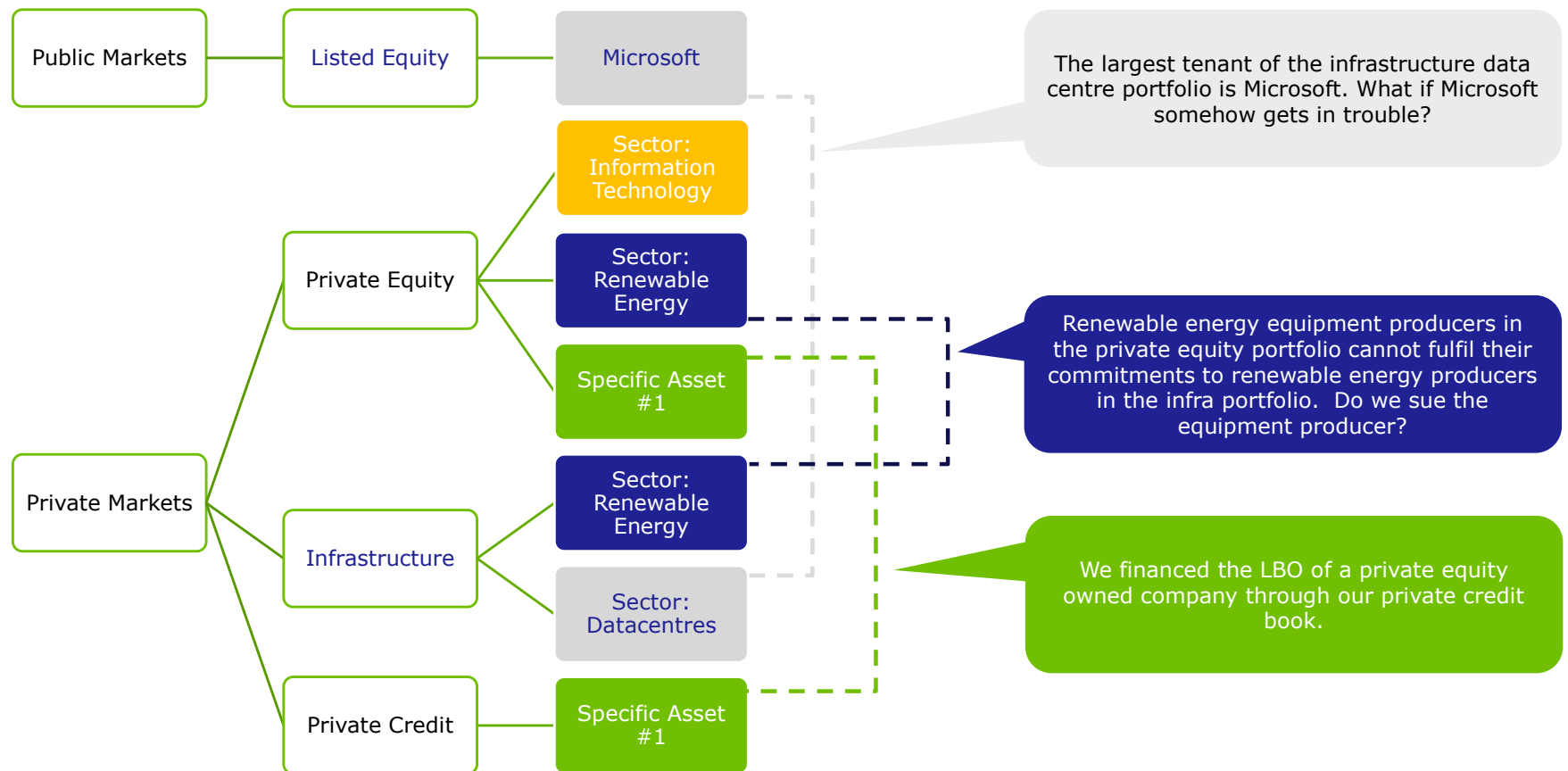
Allocation to one – or a limited number of managers (or funds) – can also lead to over-exposure to

- Manager specific performance
- Manager specific operational risk
- Manager specific governance issues
- Manager specific key-person risk

Mitigation

- Avoid
 - Alternative would be to participate in multi-manager platforms
- Mitigation mechanisms
 - Advanced operational due diligence
 - Max exposure per manager

Concentration Risk across Portfolio's - Illustrative



Sector Investing – Reputational Risks

- PFZW is the pension fund of, for, and by the healthcare and welfare sector. Employees, employers, and social partners work together at PFZW to ensure a good pension in a habitable world
- PGGM executes the pension strategy formulated by PFZW
- This includes the four points articulated to the left
- **Importantly, including investing in the healthcare sector in the Netherlands**

1. We are there for you

A lot is changing in the world around us and in the pension sector. [...] Your pension is becoming more personal. In doing so, we aim to increase financial insight and awareness.

2. You are entitled to a good pension

We ensure a good pension for everyone who works or has worked in healthcare and welfare. [...] We make pensions as easy and personal as possible—by being there at moments that matter now for your pension later. And by listening carefully to you! That way, we can continuously improve our services.

3. We are working towards sustainable investing

[...] The majority of the pensions we pay out comes from the returns on our investments. In doing so, we look not only at risk and return, but also at the sustainability of our investments. This way, we make a positive contribution to the healthcare and welfare sector and to the livability of our world

4. We contribute to a vital sector

We want everyone to be able to work in healthcare and welfare in good health and with enjoyment—and to enjoy a well-deserved pension. [...] We share our knowledge and experiences from the sector to strengthen the vitality of both you and your employer.

Health and Welfare Sector Investing

- We invest in the Health and Welfare sector to
 - Generate a return
 - Generate impact
- Are these mutually exclusive purposes?
 - Does extracting profit from investments hamper the sector's vitality?
 - Does not investing in the sector make the sector's vitality even worse?

Hoe private equity geld verdient in de zorg

Buitenlandse excessen

Grote excessen en agressieve praktijken, zoals de met schulden overladen en uitgeknepen [verpleeghuizen in het Verenigd Koninkrijk](#), lijken er op dit moment in Nederland niet te zijn. De aanwezigheid van investeerders is hier nog relatief pril, en de eerste stappen zijn gezet door partijen met een relatief behoudend karakter en lange investeringshorizon. Bovendien houden toezichthouders en zorgverzekeraars de zorgaanbieders in de gaten.

Julian Bushoff (GL-PvdA): 'Mag je binnen de zorg een goede boterham verdienen? Absoluut'

VWS: geen verbod op private equity in de zorg, wel maatregelen

Private Markets Investing - Complexity

Knowledge of Asset Class

- Investment teams have to know what they are doing if they invest in anything, including in private markets
- Requires specialist skills
- Investment teams must have a reasonable and adequate basis, supported by appropriate research and investigation, for any investment analysis, recommendation, or action*
- Research and investigation comes at a cost as well
- Running private markets books is not cheap

Valuing Private Markets Assets

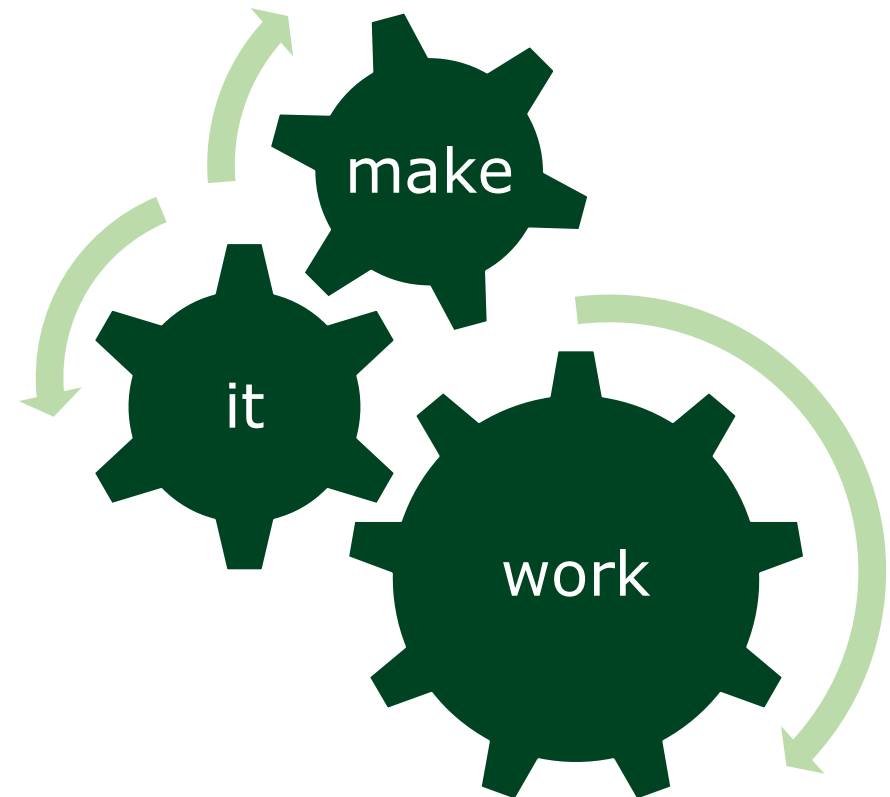
- By definition, these assets are not traded so cannot use a market's price discovery feature
- Mark to model
- Typically using discounted cashflows
 - Cashflow estimation
 - Discount factors including but not limited to CAPM beta and company specific risk premiums
- Need to ensure consistent and fair valuation across a heterogeneous portfolio

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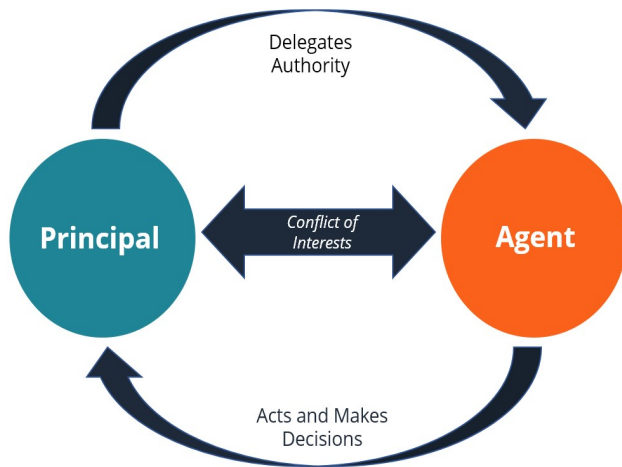
Investment Risk on Deal Level



Why – How - What

Why

Risk Analysis helps solve the **principal-agent problem**



How

Independent risk analysis on policy and investment proposals and portfolios, including **Sustainability**

Proactive involvement in the entire investment chain



What

- Investment Risk Analysis (**IRA**)
- Monitoring opinion (dashboards and **Watchlist**); and
- Portfolio insights (**research** reports).



Sample Risk Process

Team discussion

1. Factsheet

Thomas Bravo Fund XVI	
Deal description	PE proposes to commit up to USD 150m to Thomas Bravo XVI. RA agrees to proceed and rates the proposal acceptable with risk rating score 2.0 and ESG risk score medium .
Deal team composition	RA balances the following key attributes and risks:
Investment thesis	<ul style="list-style-type: none"> Track record is strong, albeit with some points of attention (see 1). Sustainability of elevated valuations in software sector (see 2); Substantial unrealized portfolio (see 3); Terms & conditions remain unfavorable (see 4).
Key risks	2.0
Deal characteristics	<p>DEAL CHARACTERISTICS</p> <p>In 2022 the PE team committed to Thomas Bravo ("TB") Fund XV for the first time, replacing Silver Lake in the GLBO portfolio. Now the PE team asks IC approval to commit up to USD 150m to the next TB Fund XVI with a target size of USD 220m, excluding USD 1.5bn GP commitment. The fund is a continuation of the investment strategy pursued in predecessor funds. The manager targets control investments in market leading software companies mostly based in North America. Assets are purchased across 3 subsectors within software and technology enabled services: (i) applications software, (ii) infrastructure software, and (iii) cybersecurity. TB has over USD 1.30bn AUM across five strategies which are managed by dedicated teams: Flagship, Discovery, Explore, Growth and Credit. Since 2013 this has resulted in 54 deals yielding 1.9x TMH and only 3.9% loss ratio, which implies in the 4-year rolling companion a 'top quartile' ranking versus general GLBO peers and a 'middle' ranking versus Technology GLBO peers.</p> <p>ESG</p> <p>RA rates the net ESG risk medium (see Appendix 2). Combining the sector and country ESG risks the investment would obtain a 'moderately low' ESG risk score. RA notes that Thomas Bravo has made meaningful progress on ESG matters, but there remains still significant room to further improve on topics such as: implementing a comprehensive sustainability report at portfolio company level, develop a climate strategy and to measure carbon emissions. Therefore, RA opines that 'medium' ESG risk score reflects best the current ESG status of this manager.</p>

Risk Analysis

- Team discussion go / no-go
- Deal staffing risk team
- Safeguard deal process

IC meeting

2. Preliminary IP

Initial Risk Scan	
Deal description	PE proposes to commit up to USD 150m to Thomas Bravo XVI. RA agrees to proceed and rates the proposal acceptable with risk rating score 2.0 and ESG risk score medium .
Deal team composition	RA balances the following key attributes and risks:
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Risk Analysis

- Discuss key questions
- **Create initial risk scan**
- Discuss initial risk scan with front office

IC meeting

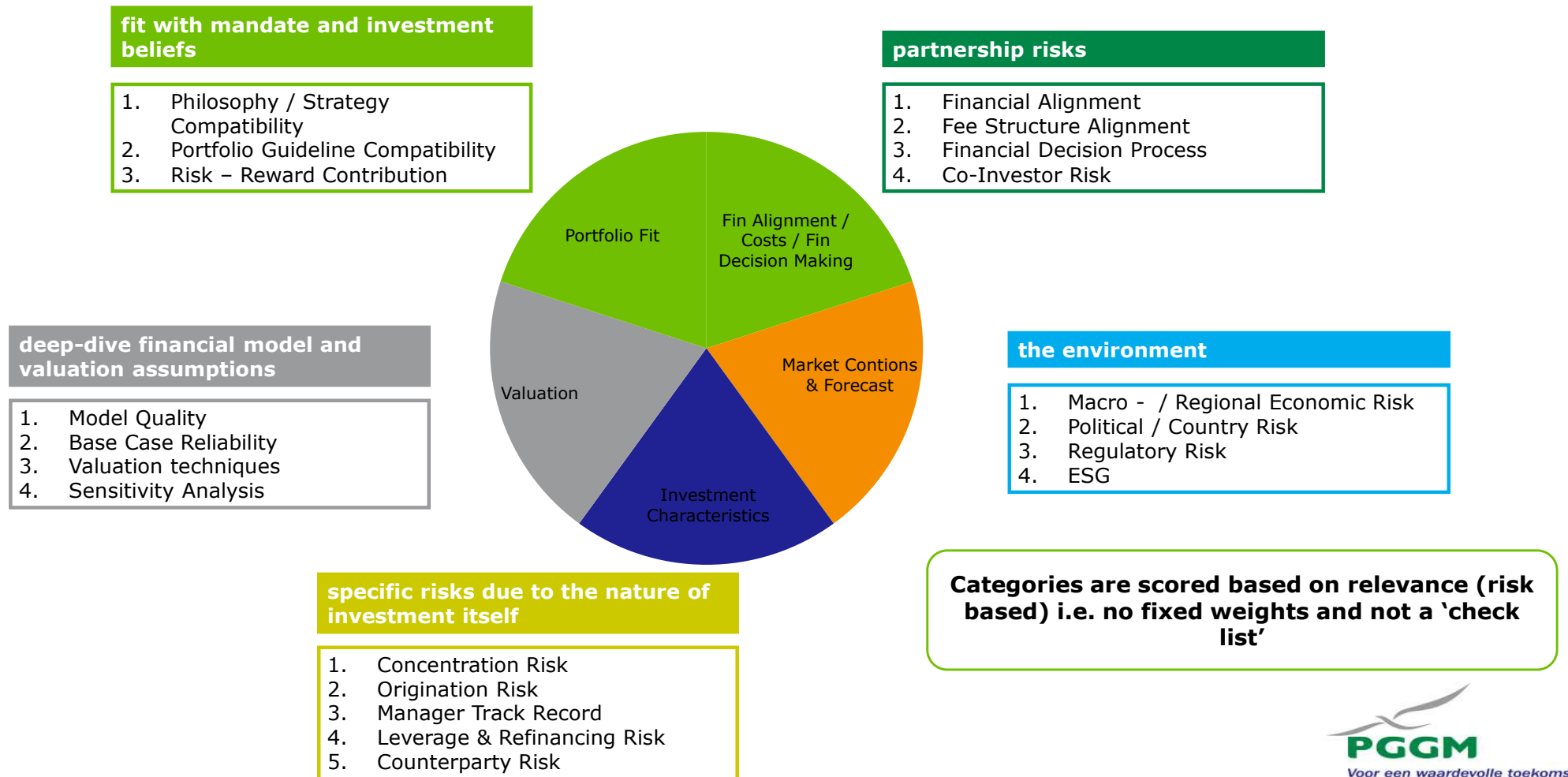
3. Final IP

INVESTMENT RISK ANALYSIS	
PRIVATE EQUITY - THOMAS BRAVO FUND XVI	AUTHOR: ROBERT BAA
DATE: 19-06-2024	REVIEWER: RUTGER LELIVELD
ABSTRACT	
PE proposes to commit up to USD 150m to Thomas Bravo XVI. RA agrees to proceed and rates the proposal acceptable with risk rating score 2.0 and ESG risk score medium .	
RA balances the following key attributes and risks:	
The key attributes are:	
<ul style="list-style-type: none"> Track record is strong, albeit with some points of attention (see 1). Sustainability of elevated valuations in software sector (see 2); Substantial unrealized portfolio (see 3); Terms & conditions remain unfavorable (see 4). 	2.0
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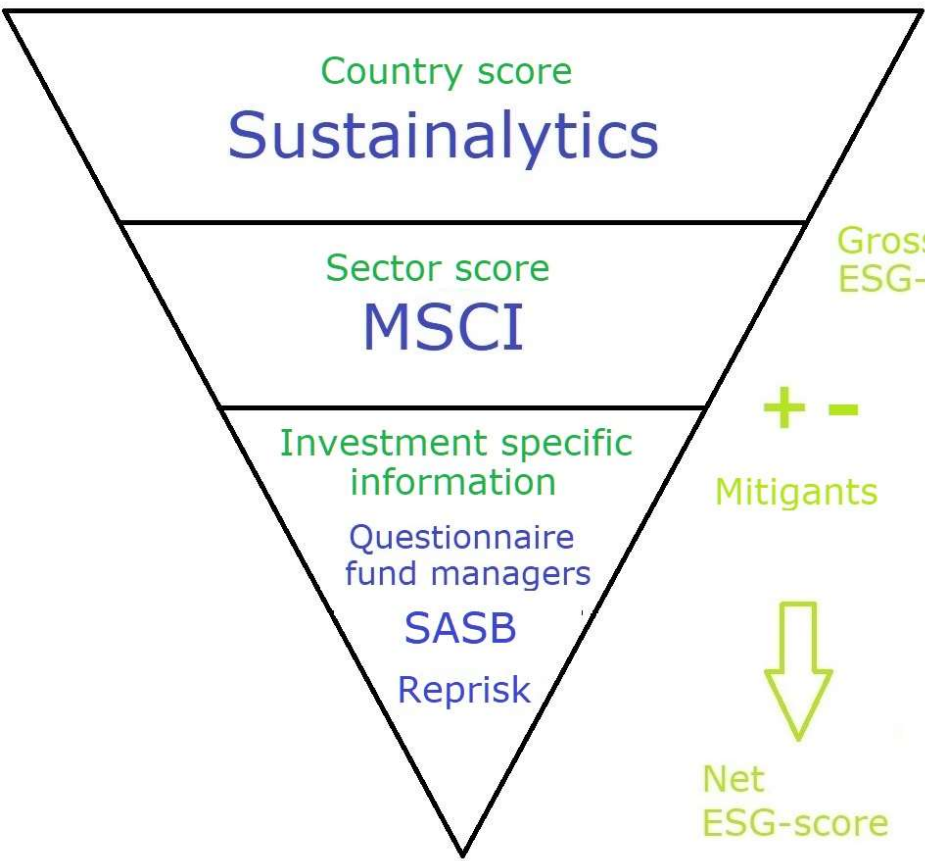
Risk Analysis

- Final discussion FO
- **Write IRA**
- Discuss in Sub-IC

Sample Investment Risk Rating



Sample Sustainability Framework



United States of America		Rating year (publishing quarter) 2017 (Q3 2018)		 SUSTAINALYTICS	Country ESG Report
ESG grade	Total score	Rank	Trend	Outlook	
B	68,5	30 out of 172	B 	Neutral	



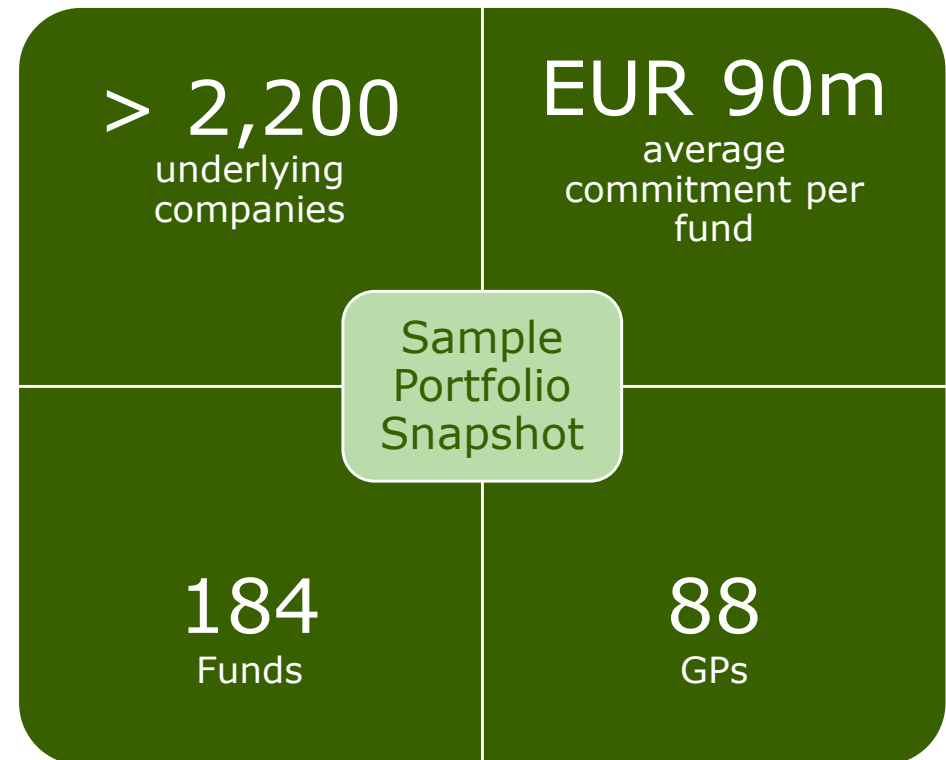
20302010	Airlines	High	Low	Low	High	Indirect	High	Med	0,47	0,80	0,80	8
20303010	Marine	Med	Med	High	High	Low	High	Med	0,73	0,60	0,80	9
20304010	Railroads	Med	Low	Med	High	Low	High	High	0,47	0,60	0,80	8
20304020	Trucking	Med	Low	Med	High	Low	High	Med	0,47	0,60	0,80	6
20305010	Airport Services	Med	Med	Low	High	Low	High	High	0,47	0,60	1,00	8



Country Risk Score		Sector Intensity Score (MSCI)									
		Low		Medium				High			
		1	2	3	4	5	6	7	8	9	10
Low	A										
Medium	B								ESG RISK		
	C										
	D										
High	E										

Indirect Investing – Private Equity Example

- You cannot control the underlying portfolio
- You can partially control
 - Which GPs or managers you work with
 - How much money you give them
 - Your relationship (deepens as you do repeat business)
 - Deal terms: use it to apply your policy at GP/deal level?
- Concentration Risk?
- Reputation Risk?
- Exposures by geography or by industry?



Specific Tools for Indirect Investing

Minimum Standards

- Controversial Armaments
- Tobacco
- Gambling and Betting
- Governments under UN and EU Sanctions

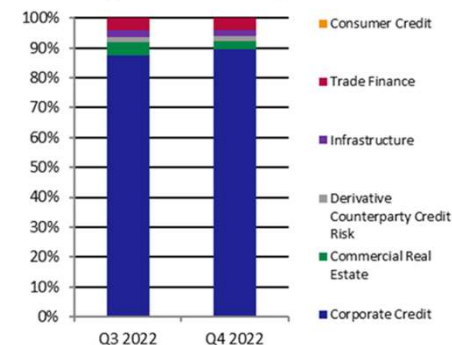
Loan Portfolios

- Max risk group/obligor limit
- Max amortisation type (bullet, balloon, linear, etc.)
- Max interest type (fixed, floating)
- Max maturity date

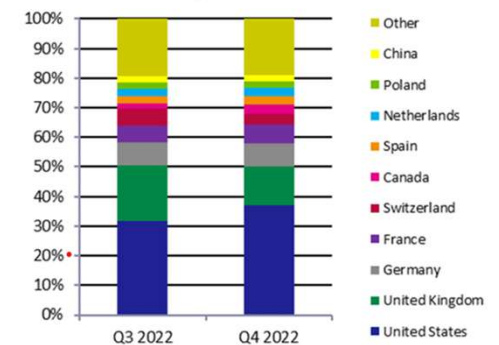
Targets and Limits

- Minimum x% in developed countries
- Maximum y% in MSCI Information Technology sector

Verdeling naar risico type



Landenverdeling



Thank You
